January 2022
Proposed Dungeness Reservoir Project

ANCHOR QEA

Phase 2 Environmental Site Assessment of the Old Sequim Dump Site

Prepared for Clallam County

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1 Introduction

This report describes the methods and findings of a Phase 2 Environmental Site Assessment (Phase 2 ESA) conducted by Anchor QEA, LLC (Anchor QEA) on behalf of Clallam County (County). The Phase 2 ESA was performed to evaluate whether petroleum or other hazardous substances have been released from waste materials located in a former waste disposal area known as the Old Sequim Dump Site (Dump) at concentrations actionable Washington's cleanup regulation, the Model Toxics Control Act (MTCA; WAC 173-340).

The Dump is located on a portion of a vacant property (Clallam County Tax Parcel 04303621000) currently owned by the State of Washington and managed by the Department of Natural Resources (DNR). The property and the adjacent parcel (Tax Parcel 043036130000) are proposed for acquisition by the County for development of the Dungeness Off-Channel Reservoir and associated public access and recreation uses. The location of the properties proposed for acquisition by the County are shown in Figure 1.

A previous Phase 1 Environmental Site Assessment (Phase 1) was performed by Anchor QEA (Anchor QEA, 2021) to review the history of the two properties proposed for acquisition, and to identify any areas of potential concern that might be impaired by contamination from past releases of petroleum or other hazardous materials. The Phase 1 report identified only the Dump portion of the properties as requiring completion of a Phase 2 ESA.

As described in the Phase 1 (Anchor QEA, 2021), the Dump includes wastes and debris disposed of primarily between the 1930s and the 1950s, and there has been no reported waste disposal activity at the Dump since the mid-1970s. The dumping was not a State-authorized activity, and no individuals or organizations responsible for the dumping have been identified. Wastes appear to have been dumped by individuals trespassing on the Property. The materials were dumped down a hillside west of an old railroad grade adjacent to River Road.

The Dump location is shown in Figure 2. As described in the Phase 1, the Dump had been estimated by DNR staff to cover an area approximately 800 feet long (north-south direction) and 100 feet wide (east-west). The waste materials include automobile bodies and car parts, household appliances, broken glass and other debris and solid wastes.

The scope of the Phase 2 ESA was defined in a Personal Services Agreement between Anchor QEA and the County. The work included preliminary mapping of the waste materials and completion of soil and groundwater testing. Test methods are described in Section 2, and testing results are described in Section 3 of this report. Conclusions and recommendations of the Phase 2 ESA are described in Section 4.

2 Methods

This section describes the methods used for completion of the Phase 2 ESA activities. That work included visual delineation and mapping of waste materials in the Dump, testing of groundwater using temporary soil borings, and testing of soils from the Dump area.

2.1 Delineation of Waste Materials

Visual reconnaissance was conducted to delineate the approximate lateral extent of the Dump, and to assess the quantities and types of materials contained within it. Visible waste locations were recorded using a Trimble global position system (GPS) device.

Within the dump, there were three areas containing more abundant waste materials and a greater proportion of larger objects (e.g., auto bodies, car parts, appliances, tires). These three areas are labeled Area A (south), Area B (middle) and Area C (north) on Figure 3. The waste materials outside of these areas tended to be smaller in size, more scattered, and covered in vegetation. Daily logs documenting the visual reconnaissance and inventory are attached as Appendix A.

2.2 Initial Groundwater Testing

Initial groundwater testing was performed in May of 2021. Groundwater gradients near the Dump were estimated in the Phase 1 to flow in a north-northwesterly direction toward the Dungeness River, following local topography and the flow of the Dungeness River. Three downgradient sampling locations were located on the access roadway immediately west of the Dump. These downgradient locations were as close as practicable to the Dump without requiring clearing or grading work.

Public and private utility locates were performed to verify the absence of underground utilities in the work areas. Then a sonic drilling rig operated by Cascade Drilling, Inc. was used to advance three 6-inch diameter boreholes to depths at least five feet below the apparent water table.

During drilling, continuous soil cores were collected and logged by an Anchor QEA geologist licensed in the State of Washington. After reaching the total depth of each borehole, the advancement tooling was removed from the borehole and a temporary well consisting of 2-inch diameter polyvinyl chloride (PVC) well casing with 5-feet of pre-packed screen was installed in the open borehole. Field boring logs for the three soil borings including depth and screened interval of the temporary wells are included in Appendix B.

After installation of the temporary wells, groundwater was purged via low-flow purge methods with a peristaltic pump until water quality parameters (temperature, dissolved oxygen, specific conductivity, pH, oxidation-reduction potential, and turbidity) in the purge water stabilized for three consecutive

3-minute interval readings. Field Sampling Data Sheets with groundwater monitoring parameters measured during purging for the three groundwater samples are included in Appendix C.

Groundwater samples were collected by peristaltic pump into pre-cleaned sample containers for analytical testing. Groundwater samples were submitted to ALS Environmental (ALS) analytical laboratory in Kelso, Washington and analyzed for the following parameters:

- Volatile Organic Compounds by Environmental Protection Agency (EPA) Method 8260C
- Gasoline-range Total Petroleum Hydrocarbons (TPH) by method NWTPH-Gx
- Extractable TPH by method NWTPH-Dx (method includes diesel and residual-range hydrocarbons; paired analysis performed both with and without silica gel cleanup)
- Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270D with selective ion monitoring (SIM)
- 13 Priority Pollutant Metals (total and dissolved) by EPA Method 6020A (most metals) and 7470A (Mercury only).

The chain-of-custody form for the groundwater samples from the temporary wells is attached in Appendix D.

Because groundwater sampling was performed using open borings and temporary well screens rather than from permanent monitoring wells, groundwater samples were anticipated to contain elevated levels of turbidity. For heavy metals, which are particularly sensitive to turbidity artifacts, groundwater sampling included analysis for both total and dissolved metals. Samples for dissolved metals were filtered in the field with a 0.45-micron in-line filter. Data interpretation in Section 3 considered the expectations outlined in the MTCA rule (see WAC 173-340-720(9)(b)). That portion of the rule addresses the impact of turbidity on metals concentrations in groundwater samples. The measured turbidity levels in the total metals samples and the differences between the total and dissolved metals provide a basis for quantifying the effects of turbidity and naturally occurring metals on the measured results.

The groundwater sampling areas were located in areas of extensive vegetation and porous sandy soils. The test methods for extractable total petroleum hydrocarbons can produce false-positive results in the presence of this type of naturally occurring, polar organic matter. The NWTPH-Dx test method includes a cleanup step (silica gel cleanup) that can be used to remove polar organic matter without removing petroleum hydrocarbons from the sample. Given the likely presence of vegetation-related polar organic matter in the groundwater samples, the testing for petroleum by the NWTPH-Dx analysis was performed twice, once with and once without the silica gel cleanup step.

2.3 Soil Testing

Soil testing was performed in May 2021. Soil testing was performed following visual delineation of the extent of the waste materials in the Dump. Testing locations were selected based on the nature and extent of debris observed during the reconnaissance. A total of 20 sampling locations were selected as shown in Figure 3.

At each sampling location, surficial vegetation (leaf litter, pine needles, etc.) was removed. Soil samples were then collected from 0-6 inches below the ground surface. Soil samples were collected with a decontaminated stainless-steel spoon. Additional soil aliquots were collected in sealable plastic bags for volatile organic compound headspace analysis with a photoionization detector (PID).

During sample collection, observations were made regarding the composition of nearby waste debris. Soil sample collection details are presented in Table 2.

Seven of the 20 samples were submitted to the laboratory (ALS Kelso) for chemical analysis. The analytical laboratory was instructed to archive the remaining 13 samples in case they were required for further analysis. The 7 primary soil samples were analyzed for following:

- Polychlorinated Biphenyls (PCBs) by EPA method 8082A
- PAHs by EPA Method 8270D SIM
- Extractable TPH by NWTPH-Dx (performed without silica gel cleanup)
- 13 Priority Pollutant Metals by EPA Method 6020A and 7471A (Mercury only)

Because none of the soil samples exhibited elevated PID readings during the headspace analysis (meaning that volatile hydrocarbons were absent), none of the soil samples were submitted for analysis of gasoline hydrocarbons or volatile organic compounds.

2.4 Follow-Up Groundwater Testing

As follow-up to the initial groundwater testing as described in Section 2.2, a permanent monitoring well was installed adjacent to soil boring location SB3 on September 23, 2021. The well was installed to allow for follow-up monitoring of groundwater at this location. For details on the well installation activities, refer to the *Phase 1 Geotechnical Data Report* (Shannon & Wilson, 2021).

Following installation, monitoring well SB3 was developed by Anchor QEA on October 12, 2021, by a combination of surging the well screen with a tight-fitting surge block and purging groundwater with a peristaltic pump. Development continued until at least ten casing volumes of water were removed, water quality parameters (temperature, pH, and conductivity) stabilized within 10% for three consecutive readings, and as much sediment as feasibly possible was removed from the well sump.

Two groundwater samples (an original and a duplicate) were collected from SB3 on October 13, 2021, approximately 16 hours after development, using a peristaltic pump via low flow purging and sampling methods. The samples were submitted to Apex Laboratories in Tigard, Oregon for analysis. The original sample was analyzed for the following:

- Extractable TPH by method NWTPH-Dx (method includes diesel and residual-range hydrocarbons; paired analysis performed both with and without silica gel cleanup)
- Total Metals (arsenic and chromium) by EPA Method 200.8
- Dissolved Metals (arsenic and chromium) by EPA Method 200.8.

The duplicate sample was analyzed only for extractable TPH (with and without silica gel cleanup) by the same methods as above.

3 Results

This section summarizes the results of Phase 2 ESA. Results of chemical testing of groundwater and soils are presented in Tables 3 and 4. Measured chemical concentrations are compared to applicable MTCA cleanup levels for groundwater (WAC 173-340-720; Table 3) and soils (WAC 173-340-740; Table 4) at sites with unrestricted land use, respectively. Results indicate the presence of limited soil and groundwater contamination in the immediate vicinity of the Dump.

3.1 Extent of Debris

The estimated lateral extent of debris at the Dump is shown in Figure 3. The waste materials cover a contiguous, irregularly shaped area that is up to 750 feet long (north-south direction) and up to 100 feet wide (east-west direction). This is generally consistent with the description provided by DNR staff and records as summarized in the Phase 1 (Anchor QEA, 2021).

Three areas of the Dump contain more extensive accumulations of debris, including significant larger waste materials (automobile bodies and parts, tires, appliances) and thicker accumulations of smaller debris (broken glass, small metal objects, household refuse). These areas are identified on Figure 3 as Area A (southernmost area), Area B (middle area) and Area C (northernmost area). Areas A, B and C are surrounded by a larger area of scattered debris with fewer large objects and thinner waste accumulations. The total areal extent of the Dump is estimated to be roughly one acre:

Area A (south):	7,780 square feet (0.18 acre)
Area B (middle):	4,525 square feet (0.10 acre)
Area C (north):	6,250 square feet (0.14 acre)
Areas of scattered debris	21,855 square feet (0.50 acre)
Total area (Figure 3):	40,410 square feet (0.93 acre)

Due to the irregular distribution of waste materials and the extensive vegetation present in the area, the areas listed above and shown in Figure 3 are considered preliminary and may not include all waste debris. A more complete delineation could be accomplished using a metal detector (to identify metal objects covered in vegetation or cover soil). This type of work may be appropriate to perform prior to waste removal to refine the waste removal boundary.

3.2 Groundwater Quality

Groundwater samples were initially tested at three temporary boring locations immediately downgradient of the Dump (Figure 3), and follow-up groundwater testing was performed with a groundwater monitoring well installed at one of these locations.

The temporary borings and the groundwater monitoring well were installed with sonic drilling methods. This was selected for the work, because the subsurface soils contain extensive gravel and cobbles that limit the effectiveness of other drilling methods (e.g., Geoprobe testing or drilling with a hollow-stem auger).

3.2.1 Results of Initial Groundwater Testing

Groundwater was encountered between 16 and 18 feet below ground surface. Shallow soils encountered in the borings included a layer of roadbed materials and an underlying layer of native organic soils containing roots and woody debris. Deeper soils encountered during drilling included primarily sandy silty gravel and cobbles. The temporary soil borings were extended to depths of 25 feet prior to placing the temporary well screens and collecting groundwater samples. Boring logs are contained in Appendix A.

Groundwater samples were collected from temporary well screens placed in the three boreholes. Groundwater sampling data sheets are included in Appendix B. Water samples were collected using a peristaltic pump. Pumping was continued to purge turbid water prior to collection of analytical samples. However, high turbidity remained present in all samples, with the water samples appearing cloudy with a brown tint. This is typical for water samples collected from temporary borings (permanent monitoring wells include a sand pack and are developed to remove turbidity associated with the temporary disturbance of well installation). Water that is visibly clear typically has turbidity values of less than 10 nephelometric turbidity units (NTUs), whereas the turbidity readings of the samples collected during the Phase 2 ESA ranged from 283 to 658 NTUs.

Analytical testing results for the three groundwater samples from the temporary soil borings are presented in Table 3 along with applicable data qualifiers. Laboratory testing reports are attached in Appendix G. Results that are "U" qualified were not detected. Results that are "J" qualified were above the Method Detection Limit (MDL), but below its Method Reporting Limit (MRL). These J-qualified values should be considered estimates. Other data qualifiers are listed in the table notes.

Groundwater testing results were compared to MTCA Method A and Method B groundwater cleanup levels as described below:

- Heavy metals: There were no confirmed exceedances of MTCA cleanup levels for groundwater at any of the three locations. Dissolved metals results in all three water samples were well below applicable cleanup levels. There were no exceedances of groundwater cleanup levels for any of the 13 heavy metal compounds tested in the total metals measurements from any of the borings except for arsenic and chromium, which were slightly elevated (by 23 and 4 percent, respectively) at location SB3. These two compounds were well below the cleanup levels in the corresponding filtered groundwater sample for SB3.

Comparison of the total and dissolved metals results and the high measured turbidity values in the samples (658 NTU) confirm that the detected arsenic and chromium concentrations in the total metals analysis were the result of excessive sample turbidity and do not indicate the presence of groundwater contamination.

- VOC Compounds: There were no exceedances of applicable cleanup levels for volatile organic compounds in any of the water samples. Detections of VOCs were limited to trace levels below applicable reporting limits (i.e., all detected values were J-flagged).
- PAH compounds: There were no exceedances of applicable cleanup levels for PAH compounds. Detections of PAHs were limited to trace levels below applicable reporting limits (i.e., all detected values were J-flagged). No carcinogenic PAH compounds (cPAH) were detected).
- Petroleum Compounds:
    - Gasoline Hydrocarbons: There were no exceedances of gasoline cleanup levels in any of the groundwater samples. Detections of gasoline were limited to trace levels below applicable reporting limits (i.e., all detected values were J-flagged).
    - Extractable Petroleum Hydrocarbons: Extractable hydrocarbons were confirmed to be present in excess of MTCA cleanup levels at one location, boring SB3, but not at the other two groundwater sampling locations:
        - Testing Results for Locations SB1 and SB2: Testing results indicate that petroleum concentrations are below MTCA method A cleanup levels at locations SB1 and SB2. At these locations, extractable hydrocarbons were initially detected at low levels (0.39 to 0.51 mg/L). But the analyst noted that the chromatographic patterns did not match the petroleum standards. Additionally, when silica gel cleanup was included in the petroleum analysis (that cleanup step removes polar organic materials associated with vegetation or other naturally occurring non-petroleum hydrocarbons, leaving only non-polar petroleum hydrocarbons) the measured hydrocarbon concentrations dropped below method detection limits. Results confirm that the detected hydrocarbons at SB1 and SB2 were polar organic matter, either non-petroleum hydrocarbons or heavily biodegraded petroleum hydrocarbons.
        - Testing Results for Location SB3: At location SB3, the analyses performed with and without silica gel indicated both the presence of polar (i.e., non-

petroleum) and non-polar (i.e., petroleum) hydrocarbons. The extractable hydrocarbon concentrations were initially detected at a concentration of 1.65 mg/L. After silica gel cleanup was included in the analysis to remove non-petroleum hydrocarbons, this concentration decreased to 0.94 mg/L. Results indicate that some, but not all, of the detected hydrocarbons at SB3 were non-petroleum hydrocarbons or heavily degraded petroleum. However, the concentration of the initial (tested without silica gel) and remaining (tested with silica gel) hydrocarbons exceeded the MTCA Method A cleanup level for groundwater (0.5 mg/L). The laboratory report indicated that the detected hydrocarbons were heavier than the residual oil calibration standard used in the analysis.

3.2.2 Results of Follow-Up Groundwater Testing

The groundwater well installed at location SB3 was used for follow-up testing to confirm the results of groundwater monitoring performed using the temporary soil borings. Following installation and development, the well was sampled for heavy metals (arsenic and chromium) and extractable TPH (with and without silica gel).

- Heavy metals: Arsenic and chromium were both below method detection limits in the follow-up groundwater testing. Results confirm that groundwater is not impacted by these contaminants.

- Petroleum Hydrocarbons: Results for testing performed without silica gel confirmed the presence of extractable hydrocarbons at an average concentration of 0.542 mg/L. Results for testing performed with silica gel were not significantly different (0.565 mg/L), confirming that these hydrocarbons represented petroleum compounds. Results of both analyses slightly exceeded the MTCA Method A groundwater cleanup level (0.5 mg/L).

Taken together with the initial groundwater testing results, the follow-up testing results confirm that groundwater is impacted by low levels of oil-range petroleum hydrocarbons at concentrations slightly above applicable cleanup levels. The groundwater is not impacted by heavy metals.

3.3 Soil Quality

Analytical results for the seven soil samples collected from areas A, B and C and submitted for chemical testing are presented in Table 5. Corresponding laboratory reports are included in Appendix G. Concentrations that are "U" qualified were not detected. Concentrations that are "J" qualified, indicate that the analyte was detected low concentrations, above the MDL but below the MRL.

Soil testing results were compared to MTCA Method A and Method B soil cleanup levels. Results confirmed the presence of soil contamination in one portion of Area A. The contamination included cadmium and lead, consistent with the presence of older, painted metal debris in the Dump waste materials. No other soil contamination was detected at concentrations exceeding MTCA cleanup levels. Specific testing observations included the following:

- Heavy metals:
    - Sample A5: Soil cleanup levels were exceeded at sample A5 collected within Area A. In that sample there were notably increased concentrations of cadmium, lead and zinc. These three metals are common in older paint formulations. Both cadmium and lead exceeded the applicable soil cleanup levels. Lead concentrations (586 mg/kg) exceeded the cleanup level (250 mg/kg) by a factor of more than two times. Zinc did not exceed the applicable Method B soil cleanup level.
    - Other Soil Samples: No cleanup levels were exceeded for heavy metals in the other soil samples. Cadmium concentrations were elevated in sample A3 but remained slightly below the applicable cleanup level (1.74 mg/kg in comparison to a cleanup level of 2.0 mg/kg).
- PAH compounds: There were no exceedances of applicable cleanup levels for PAH compounds in any of the soil samples tested. The highest concentrations of cPAH compounds were measured in sample A5 (36 ug cPAH TEQ/kt), but they remained at a concentration below the applicable cleanup level (100 ug cPAH TEQ/kg).
- PCB Aroclors: PCB compounds were not detected in any of the seven soil samples tested.
- Petroleum Compounds:
    - Gasoline hydrocarbons: No hydrocarbon vapors were present during the PID headspace screenings performed on any of the samples. Therefore, no testing was performed for gasoline hydrocarbons in the soil samples.
    - Extractable petroleum hydrocarbons: There were no exceedances of cleanup levels for extractable petroleum hydrocarbons (diesel and oil) in any of the test samples. As no silica gel cleanup was used in the analytical testing for soils, measured values are likely biased high due to the presence of vegetation and naturally occurring organic matter in the soils. The highest concentrations were measured in sample A1 (640 mg/kg), with the other measured values ranging from 43 to 206 mg/kg. All of these measured concentrations are well below the cleanup level of 2,000 mg/kg.

4 Conclusions and Recommendations

Results of the Phase 2 ESA confirmed that a limited amount of soil and groundwater contamination is associated with the Dump, located in the southern portion of the Property. Additional actions will be required to correct those conditions.

The location and overall footprint of the Dump is generally consistent with previous information provided by DNR. Mapping of the Dump materials indicates that the waste debris covers an irregularly shaped area of approximately one acre in size as shown in Figure 3.

The extent of existing soil contamination at the Property appears to be limited at this time, with exceedances of MTCA soil cleanup levels detected in only one of the seven soil samples analyzed during the Phase 2 ESA. Detected soil contaminants included cadmium and lead, both of which are common in older paint formulations. These contaminants were likely released to the soil during decomposition (i.e., flaking and rusting) of painted metal debris present in the Dump.

Results of testing confirm that some hazardous substances are present in the waste materials and have the potential to release additional contamination to surface soils if the waste materials are not removed. Therefore, Anchor QEA recommends that the waste materials be removed. Given the type and quantity of waste materials present, a thin layer of soil and some trees and other vegetation would need to be removed along with the wastes.

Groundwater testing included analysis for a wide range of parameters. No impacts to groundwater were present for heavy metals, PAH compounds, VOC compounds, gasoline or diesel hydrocarbons. However, low levels of oil-range hydrocarbons were identified in one of three groundwater testing locations collected adjacent to the Dump from temporary soil borings. Exceedance of groundwater cleanup levels at that location was confirmed in follow-up testing performed using a groundwater monitoring well installed adjacent to the original testing location. The concentrations exceeded the cleanup levels by less than 20 percent in that location.

Waste removal, with confirmation testing of soils to confirm that no contaminated soil remains, would restore compliance of the Dump Site soils with Washington's MTCA cleanup regulations. Some additional groundwater testing will also be required to verify that no additional actions (beyond waste removal) are required to resolve groundwater quality concerns associated with the Dump.

If performed by Clallam County, waste removal, soil cleanup work and confirmation groundwater monitoring at the Dump would likely be eligible for cleanup grants under Washington's remedial action grant program (see WAC 173-322A). That program can fund up to 50 percent of eligible

cleanup work performed by a qualifying local government. If performed by DNR, the work would not be eligible for that particular grant program.

5 References

Anchor QEA, 2021. Phase 1 Environmental Assessment, DNR River Road Properties. Prepared on behalf of Clallam County in support of the Proposed Dungeness Reservoir Project. January 2021.

Tables

Table 1
Groundwater Sample Details

Location ID	Coordinates		Sample ID	Date Collected	Time Collected	Estimated Ground Surface Elevation (feet NAVD88)	Total Depth Drilled (feet bgs)	Depth to Groundwater (feet bgs)	Screened Interval (feet bgs)
	Latitude	Longitude							
SB1	48.045406	-123.143318	SB1-GW-050621	5/6/2021	16:00	412.0	25.0	19.82	17.8 - 22.8
SB2	48.044881	-123.143705	SB2-GW-050621	5/6/2021	12:30	416.0	25.0	17.59	17.1 - 22.1
SB3	48.044322	-123.144078	SB3-GW-050621	5/6/2021	14:45	418.0	25.0	16.67	16.0 - 21.0
MW-SB3[1]	48.044322	-123.144078	DR-101321-01	10/13/2021	9:00	418.0	25.0	17.76	15.0 - 25.0
MW-SB3[1]	48.044322	-123.144078	DR-101321-02	10/13/2021	9:05	418.0	25.0	17.76	15.0 - 25.0

Notes:
1: Sample collected from the new monitoring well installed approximately 3 feet from the location of SB3 (MW-SB3).

Table 2
Soil Sample Collecton Details

Sub-area	Sample ID	Date Collected	Coordinates		Headspace Screening		Analyzed	Archived	Location	Comments/Contents
			Latitude	Longitude	Peak (ppm)	Stable (ppm)				
A	A1-SOIL-050721	5/7/2021	48.044033	-123.143555	1.5	0.7	X		Near tank	Gravelly silt topsoil with abundant roots
	A2-SOIL-050721	5/7/2021	48.044037	-123.143425	1.5	1.0		X	Near refrigerator	Gravelly silt topsoil, broken glass debris
	A3-SOIL-050721	5/7/2021	48.044094	-123.143507	1.5	0.6	X		Near car gas tank	Gravelly silt topsoil
	A4-SOIL-050721	5/7/2021	48.044281	-123.143507	1.0	0.6		X	In the midst of partial cars	Gravelly silt topsoil
	A5-SOIL-050721	5/7/2021	48.044246	-123.143524	1.8	0.5	X		Near partial car	Gravelly silt topsoil, glass, metal, and shell debris
	A6-SOIL-050721	5/7/2021	48.044224	-123.143509	1.3	0.5		X	Near partial car	Gravelly silt topsoil, broken glass debris
	A7-SOIL-050721	5/7/2021	48.044327	-123.143463	1.3	0.6		X	Near partial car	Gravelly silt topsoil
B	B1-SOIL-050721	5/7/2021	48.044900	-123.143376	1.6	1.4	X		Next to small drum	Gravelly silt topsoil
	B2-SOIL-050721	5/7/2021	48.044961	-123.143254	4.4	1.6	X		Next to fuel tanks	Gravelly silt topsoil
	B3-SOIL-050721	5/7/2021	48.044880	-123.143329	2.5	0.7		X	Near partial cars	Silty topsoil
	B4-SOIL-050721	5/7/2021	48.044994	-123.143224	2.3	1.1		X	Near partial cars	Silty topsoil
C	C1-SOIL-050721	5/7/2021	48.045557	-123.142804	1.7	0.6		X	Near partial cars	Silty topsoil
	C2-SOIL-050721	5/7/2021	48.045410	-123.142822	2.7	1.3	X		Near partial cars	Silty topsoil
	C3-SOIL-050721	5/7/2021	48.045347	-123.142827	2.6	1.2		X	Near partial cars	Silty topsoil
	C4-SOIL-050721	5/7/2021	48.045143	-123.142937	5.8	2.0	X		Near partial cars	Silty topsoil
	C5-SOIL-050721	5/7/2021	48.045181	-123.143028	1.9	0.9		X	Near refrigerator	Mostly organic material (decayed leaves and twigs)
	C6-SOIL-050721	5/7/2021	48.045273	-123.142799	1.0	1.0		X	Near partial cars	Gravelly silt topsoil, broken glass debris

Table 3
Initial Groundwater Testing Results

	Location ID	SB1		SB2		SB3	
	Sample ID	SB1-GW-050621		SB2-GW-050621		SB3-GW-050621	
	Sample Date	5/6/2021		5/6/2021		5/6/2021	
	Depth	19.82 - 22.8 ft		17.59 - 22.1 ft		16.67 - 21 ft	
	Sample Type	Normal		Normal		Normal	
	Matrix	Groundwater		Groundwater		Groundwater	
	Latitude	48.045416		48.048820		48.045099	
	Longitude	-123.143330		-123.143726		-123.045099	
	Screening Levels: MTCA Method A and B[1]	Total	Dissolved	Total	Dissolved	Total	Dissolved
Metals (µg/L)							
Antimony	6.4[(B)]	**0.196**	**0.137**	**0.242**	**0.104**	**0.486**	**0.192**
Arsenic	5	**3.08**	**0.25 J**	**3.51**	**0.2 J**	**6.16** [2]	**0.17 J**
Beryllium	32[(B)]	**0.267**	**0.02 U**	**0.251**	**0.02 U**	**0.563**	0.02 U
Cadmium	5	**0.094**	**0.025**	**0.081**	**0.02 U**	**0.304**	**0.043**
Chromium	50	**25.2**	**0.15 J**	**24.0**	**0.15 J**	**52.1** [2]	**0.16 J**
Copper	640[(B)]	**29.5**	**0.87**	**29.7**	**0.58**	**92**	**0.92**
Lead	15	**4.69**	**0.019 J**	**4.67**	**0.012 J**	**10.5**	**0.022**
Mercury	2	0.2 U	0.2 U	0.2 U	0.2 U	**0.05 J**	0.2 U
Nickel	320[(B)]	**25.6**	**0.99**	**25.0**	**0.8**	**63.4**	**2.02**
Selenium	80[(B)]	**0.3 J**	**0.2 J**	**0.3 J**	**0.3 J**	**0.3 J**	**0.2 J**
Silver	80[(B)]	**0.121**	**0.02 U**	**0.177**	**0.02 U**	**0.343**	0.02 U
Thallium	0.16[(B)]	**0.042**	**0.02 U**	**0.05**	**0.02 U**	**0.111**	**0.018 J**
Zinc	4800[(B)]	**37.0**	**6.8**	**33.8**	**2.2**	**99.7**	**9.6**
Volatile Organics (µg/L)							
Acetone [3]	7200[(B)]	**13 J**	---	**9.6 J**	---	**17 J**	---
Benzene	5	**0.14 J**	---	**0.12 J**	---	**0.12 J**	---
Carbon disulfide	800[(B)]	**0.09 J**	---	**0.11 J**	---	**0.07 J**	---
Cymene, p- (4-Isopropyltoluene)	---	**0.38 J**	---	**0.17 J**	---	2 U	---
Ethylbenzene	700	0.5 U	---	0.5 U	---	**0.07 J**	---
m,p-Xylene	---	0.5 U	---	0.5 U	---	**0.16 J**	---
Methyl ethyl ketone (2-Butanone) [3]	4800[(B)]	**3.0 J**	---	20 U	---	**5.9 J**	---
o-Xylene	1600[(B)]	0.5 U	---	0.5 U	---	**0.09 J**	---
Toluene	1000	**0.2 J**	---	**0.14 J**	---	**0.1 J**	---
All other VOC compounds	--	None Detected	---	None Detected	---	None Detected	---
Polycyclic Aromatic Hydrocarbons (µg/L)							
2-Methylnaphthalene	32[(B)]	**0.0043 J**	---	**0.0087 J**	---	**0.012 J**	---
Acenaphthene	960[(B)]	**0.0018 J**	---	**0.0028 J**	---	0.02 U	---
Acenaphthylene	---	0.02 U	---	**0.0017 J**	---	**0.0072 J**	---
Anthracene	4800[(B)]	**0.0031 J**	---	0.02 U	---	0.02 U	---
Dibenzofuran	16[(B)]	**0.0027 J**	---	**0.0028 J**	---	**0.0065 J**	---
Fluoranthene	640[(B)]	0.02 U	---	0.02 U	---	**0.0026 J**	---
Fluorene	640[(B)]	**0.0048 J**	---	**0.0052 J**	---	**0.017 J**	---
Naphthalene	160	**0.0081 J**	---	**0.0092 J**	---	**0.014 J**	---
Phenanthrene	---	**0.0055 J**	---	**0.0081 J**	---	**0.024**	---
Pyrene	480[(B)]	**0.002 J**	---	**0.0032 J**	---	**0.0048 J**	---
All other PAH Compounds	--	None Detected	---	None Detected	---	None Detected	---
Total cPAH TEQ (7 CAEPA 2005) (U = 1/2)	0.1	0.02 U	---	0.02 U	---	0.02 U	---
Total Naphthalene (1- and 2-Methyl and Naph) (U = 1/2)	160	**0.0124 J**	---	**0.0179 J**	---	**0.026 J**	---
Gasoline Range Petroleum Hydrocarbons (mg/L)							
Gasoline Hydrocarbons	1	0.012U	---	**0.0216 J**	---	**0.0208 J**	---

Table 3
Initial Groundwater Testing Results

	Location ID	SB1		SB2		SB3	
	Sample ID	SB1-GW-050621		SB2-GW-050621		SB3-GW-050621	
	Sample Date	5/6/2021		5/6/2021		5/6/2021	
	Depth	19.82 - 22.8 ft		17.59 - 22.1 ft		16.67 - 21 ft	
	Sample Type	Normal		Normal		Normal	
	Matrix	Groundwater		Groundwater		Groundwater	
	Latitude	48.045416		48.048820		48.045099	
	Longitude	-123.143330		-123.143726		-123.045099	
	Screening Levels: MTCA Method A and B[1]	Total	Dissolved	Total	Dissolved	Total	Dissolved
Exctractable Petroleum Hydrocarbons (mg/L) (analyzed without silica gel cleanup step)							
Diesel range organics (C12 - C25)	0.5	**0.15 J**	---	**0.19 J**	---	**0.71 Z**	---
Residual range organics (C25 - C36)	0.5	**0.36 J**	---	**0.2 J**	---	**0.94 O**	---
Total Diesel and Residual Hydrocarbons	0.5	**0.51** [4]	---	**0.39** [4]		**1.65** [4]	
Exctractable Petroleum Hydrocarbons (mg/L) (analyzed with silica gel cleanup step)							
Diesel range organics (C12 - C25)	0.5	0.012 U	---	0.012 U	---	0.012 U	---
Residual range organics (C25 - C36)	0.5	0.020 U	---	0.021 U	---	**0.94** [4]	---
Total Diesel and Residual Hydrocarbons	0.5	None detected	---	None detected		**0.94** [4]	

Detected concentration represents a confirmed exceedance of MTCA groundwater cleanup levels.

Bold = Detected result

J = Estimated Value. The analyte was detected at or above the Method Detection Limit but below the Method Reportling Limit.

U = Compound analyzed, but not detected above detection limit

H: The chromatographic fingerprint was identified by the lab as being heavier than the calibration standard.

O: The chromatographic fingerprint was identified by the lab as not matching the calibration standard.

Z: The chromatographic fingerprint was identified by the laboratory as not resembling a petroleum product.

1: Screening level shown is MTCA Method A unless a superscript (B) is present, in which case it is MTCA Method B Direct Contact

2: Value is from an unfiltered sample subject to turbidity interferences. Dissolved sampling results confirm that the elevated results are due to turbidity and are not indicative of the presence of groundwater contamination.

3. Acetone and methyl-ethyl ketone are common laboratory interferences.

4. Results of paired analysis with/without silica gel and the hydrocarbon patterns on the chromatograms from the hydrocarbon analysis (Appendix E) confirm that the detected hydrocarbons include naturally occuring polar organic material or partially-biodegraded petroleum hydrocarbons.

µg/L: Micrograms per liter

MTCA: Model Toxics Control Act

--- Not applicable or does not exist

mg/L: Milligrams per liter

Table 4
Comparison of Groundwater Monitoring Results at Location SB3 and MW-SB3

	Location ID	**SB3**		**MW-SB3**	
	Sample ID	**SB3-GW-050621**		**DR-101321-01**	
	Sample Date	**5/6/2021**		**10/13/2021**	
	Depth	**16.67 - 21 ft**		**17.76-25 ft**	
	Sample Type	**Normal**		**Normal**	
	Matrix	**Groundwater**		**Groundwater**	
	Latitude	**48.045099**		**48.045099**	
	Longitude	**-123.14223**		**-123.14223**	
	Screening Levels: MTCA Method A and B[1]	**Total**	**Dissolved**	**Total**	**Dissolved**
Metals (µg/L)					
Antimony	6.4(B)	**0.486**	**0.192**	---	---
Arsenic	5	**6.16** [2]	**0.17 J**	0.50 U	0.50 U
Beryllium	32(B)	**0.563**	0.02 U	---	---
Cadmium	5	**0.304**	**0.043**	---	---
Chromium	50	**52.1** [2]	**0.16 J**	1.0 U	1.0 U
Copper	640(B)	**92**	**0.92**	---	---
Lead	15	**10.5**	**0.022**	---	---
Mercury	2	**0.05 J**	0.2 U	---	---
Nickel	320(B)	**63.4**	**2.02**	---	---
Selenium	80(B)	**0.3 J**	**0.2 J**	---	---
Silver	80(B)	**0.343**	0.02 U	---	---
Thallium	0.16(B)	**0.111**	**0.018 J**	---	---
Zinc	4800(B)	**99.7**	**9.6**	---	---
Exctractable Petroleum Hydrocarbons (mg/L) (analyzed without silica gel cleanup step)					
Diesel range organics (C12 - C25)	0.5	**0.71 Z**	---	0.099 U	---
Residual range organics (C25 - C36)	0.5	**0.94 O**	---	**0.542** [4]	---
Total Diesel and Residual Hydrocarbons	0.5	**1.65** [3]	---	**0.542** [4]	---
Exctractable Petroleum Hydrocarbons (mg/L) (analyzed with silica gel cleanup step)					
Diesel range organics (C12 - C25)	0.5	0.012 U	---	0.099 U	---
Residual range organics (C25 - C36)	0.5	**0.94** [3]	---	**0.565** [4]	---
Total Diesel and Residual Hydrocarbons	0.5	**0.94** [3]	---	**0.565** [4]	---

Detected concentration represents a confirmed exceedance of MTCA groundwater cleanup levels.

Bold = Detected result

J = Estimated Value. The analyte was detected at or above the Method Detection Limit but below the Method Reportling Limit.

U = Compound analyzed, but not detected above detection limit

O: The chromatographic fingerprint was identified by the lab as not matching the calibration standard.

Z: The chromatographic fingerprint was identified by the laboratory as not resembling a petroleum product.

1: Screening level shown is MTCA Method A unless a superscript (B) is present, in which case it is MTCA Method B Direct Contact

2: Value is from an unfiltered sample subject to turbidity interferences. Dissolved sampling results, and the results from follow-up groundwater monitoring performed with MW-SB3, confirm that the elevated results are due to turbidity and are not indicative of the presence of groundwater contamination.

3. Results of paired analysis with/without silica gel and the hydrocarbon patterns on the chromatograms from the hydrocarbon analysis (Appendix E) indicate that the detected hydrocarbons include either naturally occuring polar organic material or partially-biodegarded petroleum hydrocarbons.

4. Value shown in the average of the normal sample and duplicate sample results

µg/L: Micrograms per liter

MTCA: Model Toxics Control Act

--- Not applicable or does not exist

mg/L: Milligrams per liter

Table 5
Soil Testing Results

	Location ID	A1	A3	A5	B1	B2	C2	C4
	Sample ID	A1-Soil-050721	A3-Soil-050721	A5-Soil-050721	B1-Soil-050721	B2-Soil-050721	C2-Soil-050721	C4-Soil-050721
	Sample Date	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021
	Depth	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
	Screening Levels: MTCA Method A or Method B[1]							
Conventional Parameters (percent)								
Total Solids	---	**67.7**	**78.9**	**82.5**	**89.6**	**85.1**	**79.1**	**75.8**
Metals (mg/kg)								
Antimony	32/5.4 (B)	**0.134**	**0.334**	**1.48**	**0.096**	**0.32**	**0.114**	**0.085**
Arsenic	20	**4.37**	**6.00**	**10.7**	**4.69**	**4.73**	**4.47**	**4.47**
Beryllium	160/63 (B)	**0.336**	**0.434**	**0.214**	**0.41**	**0.521**	**0.403**	**0.449**
Cadmium	2	**0.304**	**1.74**	**2.6**	**0.137**	**0.231**	**0.182**	**0.181**
Chromium	2000	**29.2**	**39.3**	**37.5**	**40.1**	**37.8**	**41.8**	**38.3**
Copper	3200/280 (B)	**28.7**	**38.6**	**63.1**	**28.8**	**26.6**	**29.6**	**26.0**
Lead	250	**10.7**	**24.7**	**586**	**8.79**	**24.3**	**10.2**	**11.0**
Mercury	2	**0.064**	**0.031**	**0.108**	**0.025**	**0.014 J**	**0.018 J**	**0.017 J**
Nickel	1600/130 (B)	**30.9**	**44.6**	**44.2**	**39.7**	**36.3**	**58.6**	**37.0**
Selenium	400/5.2 (B)	**0.2 J**	**0.2 J**	**0.2 J**	**0.2 J**	**0.16 J**	**0.2 J**	**0.2 J**
Silver	400/14 (B)	**0.08**	**0.065**	**0.204**	**0.044**	**0.05**	**0.036**	**0.05**
Thallium	0.8/0.23 (B)	**0.057**	**0.056**	**0.041**	**0.041**	**0.051**	**0.035**	**0.046**
Zinc	24000/6000 (B)	**106**	**91.8**	**606**	**65.7**	**67.5**	**66.5**	**66.0**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	320000/--- (B)	**2.3 J**	**2.2 J**	**6.1**	**1.2 J**	**1.2 J**	**1.5 J**	**2.7 J**
Acenaphthene	4800000/98000 (B)	**1.1 J**	**0.63 J**	**0.56 J**	**0.4 J**	**0.41 J**	**0.46 J**	**1.1 J**
Acenaphthylene	---	**0.49 J**	**2.2 J**	**6.5**	5.5 U	5.8 U	6.1 U	6.1 U
Anthracene	24000000/2300000 (B)	**0.67 J**	**2.9 J**	**4.5 J**	5.5 U	5.8 U	6.1 U	6.1 U
Benzo(a)anthracene	---	**1.1 J**	**3.3 J**	**26**	**0.69 J**	**0.52 J**	**0.87 J**	**0.56 J**
Benzo(a)pyrene	100	7.2 U	**9.2**	**27**	**1.2 J**	**1 J**	**1.8 J**	**1.6 J**
Benzo(b,j)fluoranthene	---	**2.9 J**	**11**	**32**	**1.1 J**	**0.89 J**	**1.6 J**	**1.4 J**
Benzo(g,h,i)perylene	---	**2.8 J**	**22**	**23**	**0.6 J**	**0.66 J**	**0.99 J**	**0.96 J**
Benzo(k)fluoranthene	---	**0.85 J**	**2.2 J**	**11**	5.5 U	5.8 U	6.1 U	6.1 U
Chrysene	---	**3.7 J**	**7.7**	**35**	**1.4 J**	**1.3 J**	**1.7 J**	**1.9 J**
Dibenzo(a,h)anthracene	---	**0.42 J**	**3.7 J**	**4.1 J**	5.5 U	5.8 U	6.1 U	6.1 U
Dibenzofuran	80000/--- (B)	**1.2 J**	**1.5 J**	**2.3 J**	**1.3 J**	**2.3 J**	**0.91 J**	**4.3 J**
Fluoranthene	3200000/630000 (B)	**4.4 J**	**6.3**	**49**	**1.3 J**	**1.7 J**	**1.7 J**	**2.1 J**
Fluorene	3200000/100000 (B)	**1.2 J**	**0.94 J**	**1.3 J**	5.5 U	5.8 U	6.1 U	**0.9 J**
Indeno(1,2,3-c,d)pyrene	---	**1.7 J**	**17**	**18**	**0.46 J**	**0.52 J**	**0.77 J**	**0.68 J**

Table 5
Soil Testing Results

	Location ID	A1	A3	A5	B1	B2	C2	C4
	Sample ID	A1-Soil-050721	A3-Soil-050721	A5-Soil-050721	B1-Soil-050721	B2-Soil-050721	C2-Soil-050721	C4-Soil-050721
	Sample Date	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021
	Depth	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
	Screening Levels: MTCA Method A or Method B[1]							
Naphthalene	5000	**1.8 J**	**2.7 J**	**12**	**2.9 J**	**2.1 J**	**1.6 J**	**4.5 J**
Phenanthrene	---	**5.4 J**	**5.9 J**	**28**	**2.6 J**	**2.8 J**	**3.3 J**	**5.6 J**
Pyrene	2400000/650000[(B)]	**3.9 J**	**7.1**	**71**	**1.2 J**	**1.3 J**	**1.6 J**	**1.5 J**
Total cPAH TEQ (7 minimum CAEPA 2005) (U = 1/2)	100	**4.334 J**	**12.997 J**	**36.46 J**	**1.989 J**	**1.786 J**	**2.751 J**	**2.493 J**
Total Naphthalene (1- and 2-Methyl and Naph) (U = 1/2)	5000	**4.1 J**	**4.9 J**	**18.1**	**4.1 J**	**3.3 J**	**3.1 J**	**7.2 J**
PCB Aroclors (µg/kg)								
Aroclor 1016	5600/---[(B)]	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1221	---	29 U	23 U	25 U	22 U	22 U	25 U	26 U
Aroclor 1232	---	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1242	---	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1248	---	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1254	500/---[(B)]	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1260	500/---[(B)]	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Aroclor 1262	---	15 U	12 U	17 U	11 U	11 U	13 U	13 U
Aroclor 1268	---	15 U	12 U	13 U	11 U	11 U	13 U	13 U
Total PCB Aroclors (U = 1/2)	1000	29 U	23 U	25 U	22 U	22 U	25 U	26 U
Total Petroleum Hydrocarbons (mg/kg) (Tested without silica gel cleanup)								
Diesel range organics (C12 - C25)	2000	**140**	**66**	**14 J**	**16 J**	**14 J**	**8.5 J**	**5 J**
Residual range organics (C25 - C36)	2000	**500**	**140**	**120**	**66 J**	**61 J**	**85 J**	**38 J**
Total Diesel and Residual Hydrocarbons	2000	**640**	**206**	**120**	**82**	**75**	**93.5**	**43**

Detected concentration represents a confirmed exceedance of applicable MTCA soil cleanup levels

Bold = Detected result

J = Estimated Value. The analyte was detected at or above the Method Detection Limit but below the Method Reportling Limit.

U = Compound analyzed, but not detected above detection limit

1: Screening Level shown is MTCA Method A, unless a (B) in superscript is present, in which case the screening levels presented are (Method B Soil Contact/Method B Protective of Groundwater in Vadose Zone)

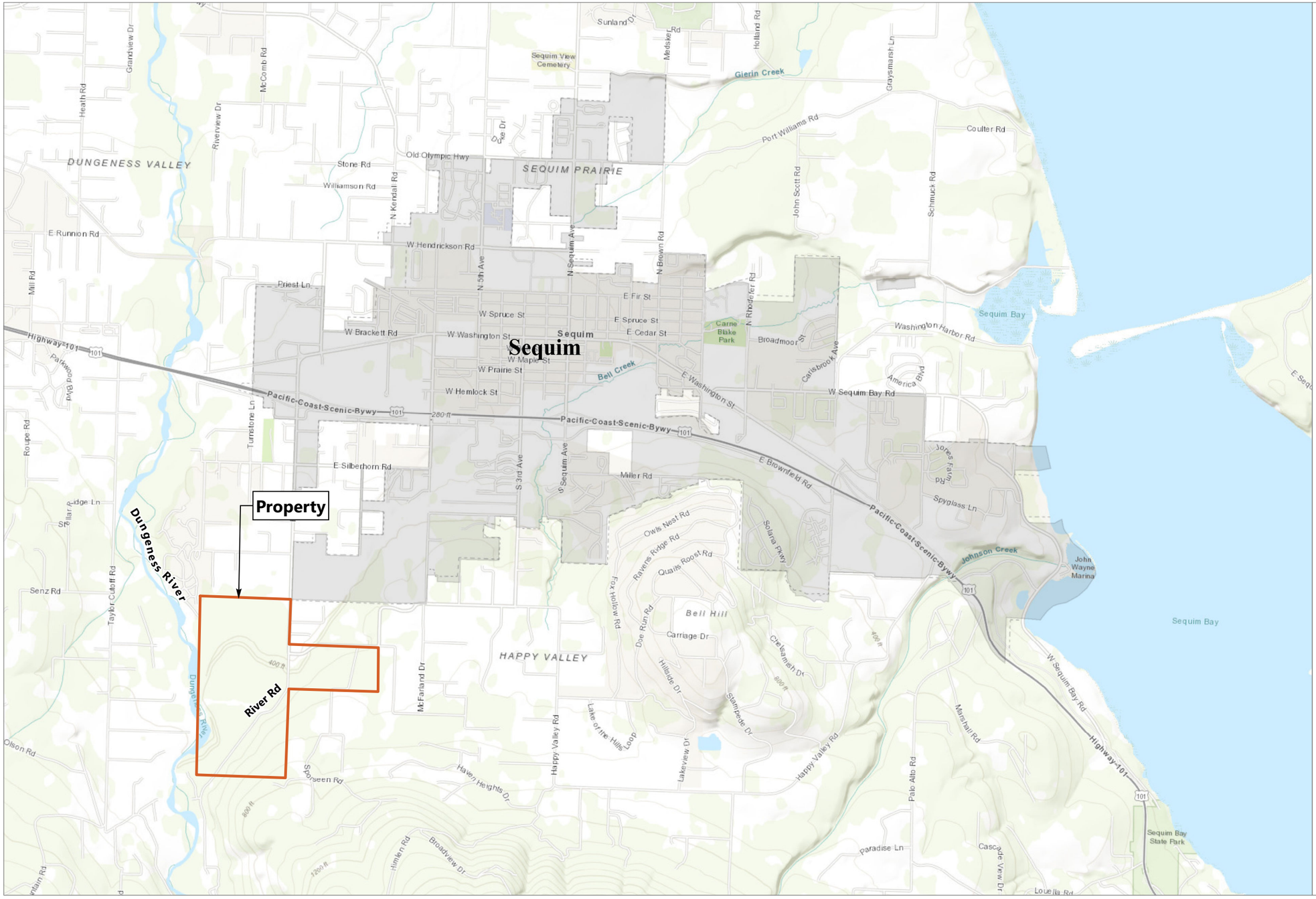
--- Not applicable or does not exist

µg/kg: Micrograms per kilogram

MTCA: Model Toxics Control Act

mg/kg: milligrams per kilogram

Figures



LEGEND:

Property Boundary

NOTE:

1. Basemap imagery sourced from Esri World Topographic Map service.

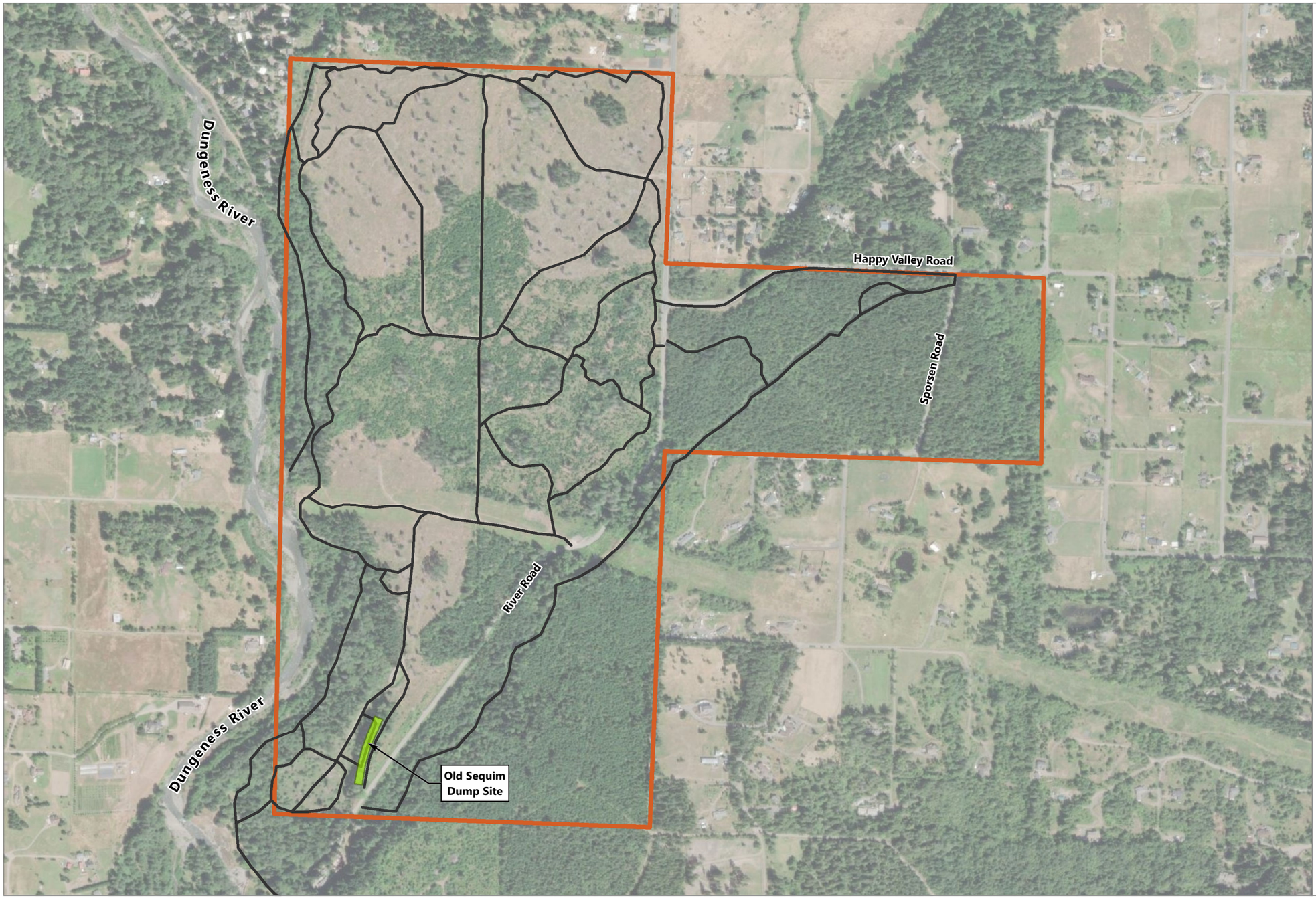
0 1

Miles

Publish Date: 2021/06/15, 3:12 PM | User: adowell
Filepath: \\orcas\gis\Jobs\Clallam_County_1439\DungenessProperty\maps\Phase_2_Sampling\AQ_DungenessProperty_Fig1_PropertyVicinity.mxd

ANCHOR QEA

Figure 1
Property Location
Old Sequim Dump Site - Phase 2 Environmental Assessment
River Road Properties



LEGEND:

- Property Boundary
- Existing Trail
- Old Sequim Dump Site

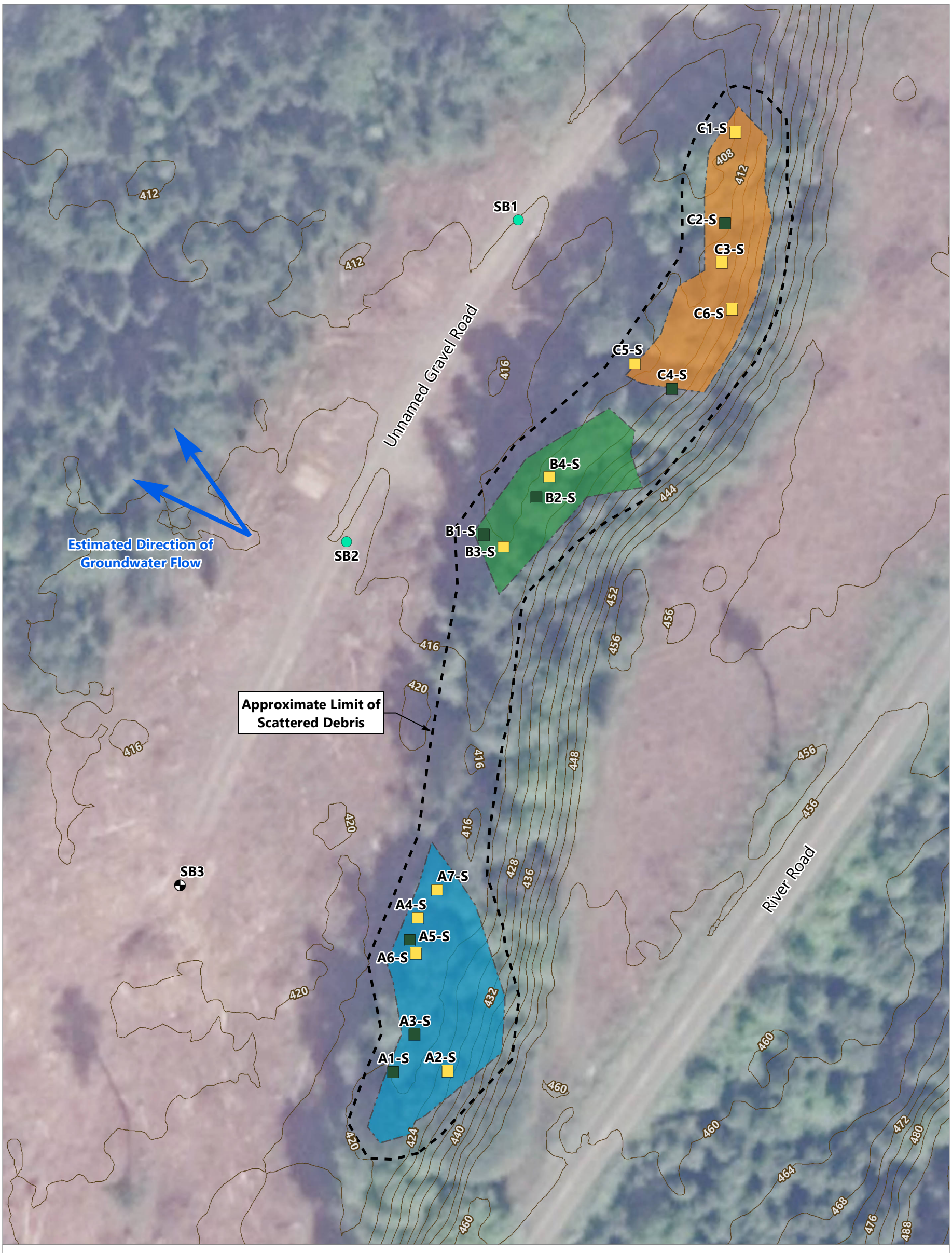
NOTES:

0 1,000
Feet

Publish Date: 2021/06/15, 12:55 PM | User: adowell
Filepath: \\orcas\gis\Jobs\Clallam_County_1439\DungenessProperty\maps\Phase_2_Sampling\AQ_DungenessProperty_Fig2_DumpSite.mxd

ANCHOR QEA

Figure 2
Old Sequim Dump Site Location
Old Sequim Dump Site - Phase 2 Environmental Assessment
River Road Properties



LEGEND:

- Soil Boring and Temporary Well Point Location
- Monitoring Well and Temporary Well Point
- Analyzed Soil Sample
- Archived Soil Sample
- 4-foot Contours

Areas of Concentrated Larger Debris

- Dump Sub-area A
- Dump Sub-area B
- Dump Sub-area C

NOTES:

1. Aerial imagery sourced from Google Earth Pro ©2016.
2. Topographic contours from National Oceanic and Atmospheric Administration (NOAA), dated May 2020.
3. Horizontal Datum: Washington State Plane North NAD83, U.S. Feet.
4. Vertical Datum: NAVD88.
5. Due to space limitations, the soil sample location IDs have been abbreviated.
6. A soil boring was advanced and a temporary well point was installed at location SB3 prior to the installation of the monitoring well.

0 100
Feet

Publish Date: 2021/11/22, 4:37 PM | User: hromer
Filepath: \\orcas\gis\Jobs\Clallam_County_1439\DungenessProperty\maps\Phase_2_Sampling\AQ_DungenessProperty_Fig3_Sequim_Dump_and_Sampling_Locations.mxd

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Figure 3
Old Sequim Dump Site Extent and Sampling Locations
Old Sequim Dump Site - Phase 2 Environmental Assessment
River Road Properties

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Figure 4

Selected Photographs of Existing Waste Materials

Old Sequim Dump Site – Phase 2 Environmental Site Assessment

River Road Properties

Appendix A
Daily Logs and Chains of Custody

Daily Log

ANCHOR QEA

Anchor QEA, LLC
6720 S Macadam Ave, Ste 125
Portland, OR 97219
Phone 503.670.1108

PROJECT NAME: Dungeness Reservoir Phase 2 **DATE:** 5/6/21 Thur

SITE ADDRESS: Sequim, WA **PERSONNEL:** Malcom

WEATHER: **WIND FROM:** N ~~NE~~ E SE S SW W NW None

SUNNY CLOUDY Prtly Cldy RAIN

LIGHT MEDIUM HEAVY

TEMPERATURE: 50-70 °F

TIME	COMMENTS
0700	Arrive at Gate to Site; Cascade Arrives; APS arrives
0700-0725	APS cleared the 3 locations for utilities
0725 0840	Mobilizing rig and support equipment to borings site
0810-~~0840~~	Calibrated YSI
0820-0830	Safety Meeting
0840--0930	Drilling SB-3
0930-	Reached TD at 25 Ft - inserted 2-inch temp well to about 21 ft bgs.
0930-0945	Mobilizing to SB-2
0945-1100	Drilling SB-2 — had to run 6-inch casing
1230	Sampled SB-2 - GW sample.
1300-1320	Pulled PVC temp well & abandoned SB-2.
1330-1500	Drilling ~~SB-3~~ SB-1 - had to run 6-inch casing
1500-1830	Collecting remaining groundwater samples

Comments:

Signature: Matthew Dale

Daily Log

ANCHOR QEA

Anchor QEA, LLC
6720 S Macadam Ave, Ste 125
Portland, OR 97219
Phone 503.670.1108

PROJECT NAME: Dungeness Reservoir Phase 2 **DATE:** 5/7/21 Friday

SITE ADDRESS: Sequim, WA **PERSONNEL:** MWilson, G-Allen

WEATHER: **WIND FROM:** N | NE | E | SE | S | SW | W | NW | None (circled)

SUNNY | CLOUDY (circled) | Prtly Cldy | RAIN

LIGHT | MEDIUM | HEAVY

TEMPERATURE: 50 - 60 °F

TIME	COMMENTS
0800	Arrive at Site and Met Gabriel
0810-0870	Safety and planning meeting
	SB1 coords 48.045441611 -123.14332988
	SB2 ↓ 48.0488196 -123.14372630
	SB3 ↓ 48.0450985T -123.14222981
0845-1000	Staking out perimeter of Area A & Survey
1000-1100	Survey of Area B
1100-1200	Survey of Area C
1200-1900	Collecting Soil Samples

Comments:

Signature: Matt Wilson

Daily Log

ANCHOR QEA

Anchor QEA, LLC
6720 S Macadam Ave, Ste 125
Portland, OR 97219
Phone 503.670.1108

PROJECT NAME: Dungeness Reservoir Phase 2 **DATE:** 5/07/21

SITE ADDRESS: Sequim, WA **PERSONNEL:** MWilson, G-Allen

WEATHER: **WIND FROM:** N | NE | E | SE | S | SW | W | NW | None (SUNNY | CLOUDY | Prtly Cldy | RAIN) **TEMPERATURE:** ° F (LIGHT | MEDIUM | HEAVY)

TIME	COMMENTS
	Inventory
	Area A
II	large truck front grill panel
I	Tractor tire
HHT HHT HHT HHT	car tire I
I	vehicle panel (metal)
II	refrigerator (old)
III	water heater (old)
II	vehicle door panel (old)
I	washing Machine
II	paint can (empty)
HHT HHT HHT HHT	Vehicle body panel (unknown)
III	fuel tank
HHT III	Partial vehicle
IIII	Stove
I	old rusted drum (empty, partial
	Area B
I	Vehicle rear panel
HHT HHT HHT IIII	Vehicle body panel
III	Vehicle door
HHT II	Partial vehicle
I	Vehicle hood
I	15-gal drum (empty - rusted)
II	fuel tank
I	stove
I	tire (Vehicle)
I	Refrigerator
	Area C/D
	Stove II
	Vehicle body Panel HHT HHT HHT HHT HHT
	Dryer I
	Tire II
	Partial Vehicle HHT HHT HHT HHT HHT
	Refrigerator I
	Fuel tank II
	Vehicle door Panel I
	Vehicle hood (
	HHT HHT HHT

Comments:

Signature: _____

Daily Log

ANCHOR QEA

Anchor QEA, LLC
6720 S Macadam Ave, Ste 125
Portland, OR 97219
Phone 503.670.1108

PROJECT NAME: Dungeness Reservoir Phase 2 **DATE:** 5/07/21

SITE ADDRESS: Sequim, WA **PERSONNEL:** Madison, G Allen

WEATHER: **WIND FROM:** N | NE | E | SE | S | SW | W | NW | None — SUNNY | CLOUDY | Prtly Cldy | RAIN — LIGHT | MEDIUM | HEAVY **TEMPERATURE:** °F

TIME	COMMENTS
Photo #	Sample log
	Area A Samples
38 1010 (8)	Sample A1 A1-Soil-050721 1010 by tank soil - Many roots, topsoil, dark brown dry PID=1.5/0.7
1 1050 (8)	A2-soil-050721 1050 by refrigerator PID=1.5/1.0 Soil - Gravelly silt topsoil, dark brown, loose, gloss debris
5 1110 (8) 1110	A3-Soil-050721 1110 by car gas tank PID=1.5/0.6 Soil same as A2 - color gray
4 1130 (8)	A4-Soil-050721 In the midst of car chassis PID=1.0/0.6 Soil same as A2-
7 1200 (8)	A5-SOIL-050721 PID=1.8/0.5 Soil - Same as A2; abundant gloss, metal, and clam shell debris
17 1300 (5)	A6-SOIL-050721 - Same as A2 - downhill of car PID=1.3/0.5
13/1305	A7-SOIL-050721 Same as A2 - but no gloss - downhill of car PID=1.3/0.6
8 1330	~~B1~~-SOIL-050721 Soil - Same as ~~B~~A2 - No gloss - Next to small barrell PID=1.6/1.1
12/1335	B2-SOIL-050721 " " " - by fuel tanks PID=4.4/1.6
9 1340	B3-SOIL-050721 No Gravel by old cars PID=2.5/0.7
6 1345	B4-SOIL-050721 PID=2.3/1.1
14 1410	C1-SOIL-050721 PID=1.7/0.6
15/1415	C2-SOIL-050721 PID=~~0.0~~ 2.7/1.3
2 1430 (5)	C3-SOIL-050721 PID=2.6/1.2
16 1435	C4-SOIL-050721 PID=5.8/2.0
11 1450	C5-SOIL-050721 Mostly organic material w/gloss ~~No gloss~~ by refrigerator PID=0.9/0.9
10 1500	C6-SOIL-050721 Gravelly Silt w/gloss by old car PID=1.0/1.0
	C8 = 1 9oz Jar, 2 VOAs w/Methanol, 1 VOC w/NaHSO4, 2 w/DI, 2 Amber
	5 1 9oz 1 VOA w/MeH, 1 VOA w/NaHSO4, 1 w DI, 1 Amber

Comments:

Signature:

Chain of Custody

LABORATORY NAME:	ALS Kelso
LABORATORY ADDRESS:	1317 S 13th Ave Kelso WA 98626
LABORATORY PHONE:	360 577 7222

Work Order No.:

Project Manager:	Matt Wilson			**Bill to:**	
Client Name:	Anchor QEA, LLC			**Company:**	Anchor QEA, LLC
Address:	6720 S Macadam Ave Suite 125			**Email:**	labdata@anchorqea.com
City, State ZIP:	Portland OR 97219				
Email:	mwilson@anchorqea.com	**Phone:**	503-670-1108		
Project Name:	Dungeness Reservoir Phase 2				
Project Number:	201439-01.02				
P.O. Number:	201439-01.02				
Sampler's Name:	M. Wilson				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

REQUESTED ANALYSIS

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals - total	6020A Priority 13 metals - dissolved	7470A - Hg total	7470A - Hg dissolved	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx			Comments
SB1-GW-050621	W	5/06/21	1600		12	X	X	X	X	X	X	X	X			
SB2-GW-050621	↓	↓	1230		12	X	X	X	X	X	X	X	X			
SB3-GW-050621	↓	↓	1445		10	X	X	X	X	X	X	X	X			
TB1	W	—	—		1							X	X			

MW 5/06/21

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson	Matt Wil	5/11/21 0915	ALS		5/11/21 0913

Revised: 5/5/2021

Chain of Custody

LABORATORY NAME:	ALS - KELSO
LABORATORY ADDRESS:	1317 S. 13th Ave Kelso WA 98626
LABORATORY PHONE:	360-577-7222

Work Order No.:

Project Manager:	Matt Wilson		**Bill to:**		
Client Name:	Anchor QEA, LLC		**Company:**	Anchor QEA, LLC	
Address:	6720 S Macadam Ave Suite 125		**Email:**	labdata@anchorqea.com	
City, State ZIP:	Portland OR 97219				
Email:	mwilson@anchorqea.com	**Phone:** 503-670-1108			
Project Name:	Dungeness Reservoir Phase 2				
Project Number:	201439-01.02				
P.O. Number:	201439-01.02				
Sampler's Name:	M. Wilson				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	

REQUESTED ANALYSIS

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals	7471A - Hg	8082A PCB	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx	Archive (-20 C)				Comments
A1-SOIL-050721	SO	5/07/21	1010		8	X	X	X	X	X	X	X					~~Hold for analysis~~ MW 5/10/21
A2-SOIL-050721			1050		8								X				
A3-SOIL-050721			1110		8	X	X	X	X	X	X	X					NO VOC or TPH-Gx analyses Requested
A4-SOIL-050721			1130		8								X				
A5-SOIL-050721			1200		8	X	X	X	X	X	X	X					
A6-SOIL-050721			1300		5								X				
A7-SOIL-050721			1305		5								X				
B1-SOIL-050721			1330		5	X	X	X	X	X	X	X					
B2-SOIL-050721			1335		5	X	X	X	X	X	X	X					
B3-SOIL-050721			1340		5								X				
B4-SOIL-050721			1345		5								X				
C1-SOIL-050721			1410		5								X				
C2-SOIL-050721			1415		5	X	X	X	X	X	X	X					
C3-SOIL-050721			1430		5								X				
C4-SOIL-050721			1435		5	X	X	X	X	X	X	X					

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson	Matthew Wilson	5/11/21 0915	K Mowen		ALS 5/11/21 0915

Revised: 5/5/2021

Chain of Custody

LABORATORY NAME:	ALS - Kelso
LABORATORY ADDRESS:	1317 S. 13th Ave Kelso WA 98626
LABORATORY PHONE:	360 577 7222

Work Order No.:

Project Manager:	Matt Wilson			**Bill to:**	
Client Name:	Anchor QEA, LLC			**Company:**	Anchor QEA, LLC
Address:	6720 S Macadam Ave Suite 125			**Email:**	labdata@anchorqea.com
City, State ZIP:	Portland OR 97219				
Email:	mwilson@anchorqea.com	**Phone:**	503-670-1108		
Project Name:	Dungeness Reservoir Phase 2				
Project Number:	201439-01.02				
P.O. Number:	201439-01.02				
Sampler's Name:	M. Wilson				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present		
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice
Cooler Custody Seals:	Yes	No	N/A	Total Containers:

REQUESTED ANALYSIS

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals	7471A - Hg	8082A PCB	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx	Archive (-20 C)			Comments
C5-SOIL-050721	So	5/07/21	1450		5								X			
C6-SOIL-050721	↓	↓	1500		5								X			
TB-2	W	—	—		1						MW 5/7/21 X					NO VOC or TPH-Gx analysis ↓
TB-3	↓	—	—		1							MW 5/7/21 X				
TB-4		—	—		1											

MW 5/07/21

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson	Matt Wilson	5/11/21 0915	ALS	K Mowor	5/11/21 0915

Revised: 5/5/2021

Chain of Custody

LABORATORY NAME: Apex Laboratories
LABORATORY ADDRESS: 6700 SW Sandburg St Tigard OR 97223
LABORATORY PHONE: 503-718-2323

Work Order No.:

Project Manager:	Matt Wilson
Client Name:	Anchor QEA
Address:	6720 S Macadam Ave Suite 125
City, State ZIP:	Portland OR 97219
Email:	mwilson@anchorqea.com
Phone:	503-347-8511
Project Name:	Dungeness Reservoir
Project Number:	201439-01.02
P.O. Number:	Sequim Dump Monitoring Well
Sampler's Name:	Mwilson

Bill to:	Anchor QEA
Company:	
Address:	
City, State ZIP:	
Email:	

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present		
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice
Cooler Custody Seals:	Yes	No	N/A	Total Containers:
Sample Custody Seals:	Yes	No	N/A	

REQUESTED ANALYSIS

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	TPH-DX with Silica Gel	TPH-Dx	Total Metals (RCRA 80	Dissolved Metals (RCRA 8)
DR-10132I-01	W	10/13/21	0900		4	X	X	X	X
DR-10132I-02	W	↓	0905		2	X	X		

TAT

- ☐ Routine
- ☐ Same Day ***
- ☐ Next Day ***
- ☐ 5 Day
- ☒ 7 Day

*** Please call for availability

Due Date:

Comments: 7 day TAT ↓

Dissolved	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr
Total	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr

Additional Methods Available Upon Request

RELINQUISHED BY

Print Name	Signature	Date/Time
Matt Wilson	[signature]	10/13/21 1715

RECEIVED BY

Print Name	Signature	Date/Time

MW 10/13/21

MW 10/13/21

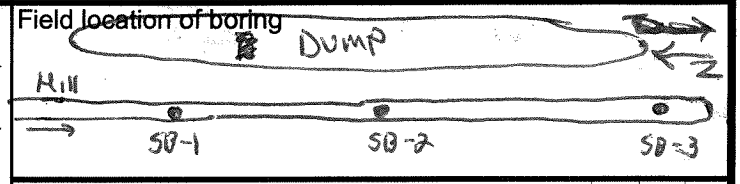
Appendix B
Boring Logs

ANCHOR QEA

BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2	**BORING ID:**	SB-1
PROJECT NUMBER:	201439-01	**DATE BEGAN:**	5/6/21
GEOLOGIST/ENGINEER:	Matt Wilson	**DATE COMPLETED:**	5/6/21
DRILLING CONTRACTOR:	Cascade Drilling John Wright	**TOTAL DEPTH (FT):**	25
DRILLING METHOD:	Sonic T6I-150	**PAGE**	1 **OF** 2
HOLE DIAMETER:	6 inches	**SAMPLING METHOD**	4 in. ID by 5 ft core barrel (CB)

Field location of boring



TIME	Temporary Well Details	SAMPLING METHOD		RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
		CB		4.2/5	0-5	1	GW	0 to 2.7ft Silty Sandy gravel, brown, loose dry	NA		
						2		2.7 to 4.4ft			
						3	wood	Wood debris, dark grey, loose, dry, silt and roots and rootlets	NA		
						4		4.4 to ~~5.7~~ 6.0ft			
		CB		2.5/5	5-10	5	SP	SAND, dark brown, moist, loose poorly graded, fine to med grained	0	100	0
						6					
						7	SW	6.0 to 10.0 ft GRAVELLY Sand, dark brown, loose, dry, well graded fine to coarse well graded fine to cobble size well rounded gravel	30	70	0
						8					
						9					
						10					
		CB		2.5/5	10-15	1	GW	10.0 to 15.0 ft Sandy Gravel, brownish gray, dry, loose, well graded fine to cobble size gravel, subangular	80	20	0
						2					
						3					
						4					
						15		15.0 to 24.2 ft Silty Sandy Gravel, Light brown, loose, dry, well graded well rounded gravel	70	15	15
		CB		4.7/5	15-20	6	GW-GM	@ 16.1 ft - wet fine to cobble			
						7					
						8					
						9					
						20					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains

DSO = Dirty Sock Odor AOPP = As on Previous Page

SAA = Same as above Δ = change

Coordinates: 48.045416 11 -123.143329 88

ANCHOR QEA

BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2
PROJECT NUMBER:	201439-01
GEOLOGIST/ENGINEER:	Matt Wilson
DRILLING CONTRACTOR:	Cascade Drilling John Wright
DRILLING METHOD:	Sonic TSI-190C
HOLE DIAMETER:	6 inches

BORING ID:	SB-1
DATE BEGAN:	5/6/21
DATE COMPLETED:	5/6/21
TOTAL DEPTH (FT):	25
PAGE	2 OF 2

SAMPLING METHOD 4 in. ID by 5 ft core barrel (CB)

Field location of boring

See Page 1

TIME	WELL DETAILS	SAMPLING METHOD	RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
		CB	5.0/5.0	20-25	1		AOPP, Silty Sandy Gravel	70	15	15
					2					
					3					
					4		24.2 to 25.0 ft SILTY GRAVEL, brownish gray, med dense, cohesive, slightly plastic, well graded fine to cobble gravel	70	~~20~~ —	30
					25					
					6					
					7					
					8					
					9					
					30					
					1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
					9					
					0					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains

DSO = Dirty Sock Odor AOPP = As on Previous Page

SAA = Same as above Δ = change

ANCHOR QEA

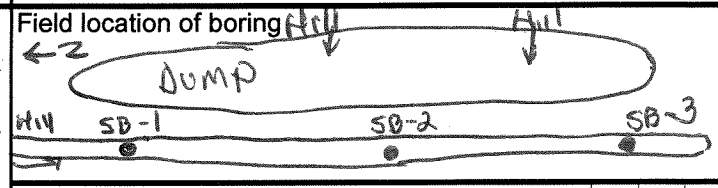
BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2
PROJECT NUMBER:	201439-01
GEOLOGIST/ENGINEER:	Matt Wilson
DRILLING CONTRACTOR:	Cascade Drilling John Wright
DRILLING METHOD:	Sonic TSI-150
HOLE DIAMETER:	6 inches

BORING ID:	SB-2
DATE BEGAN:	5/6/21
DATE COMPLETED:	5/6/21
TOTAL DEPTH (FT):	25
PAGE	1 OF 2

SAMPLING METHOD 4 in. ID by 5 ft core barrel (CB)

Field location of boring



TIME	WELL DETAILS	SAMPLING METHOD		RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
0947		CB		3.5/5	0-5	1		0 to ~~1.0 ft~~ 2.0 ft - Road Gravel, dry, loose small like ~~1.0 to ~~2.0 ft~~ - 2.0 ft~~ MR. clean ~~SILT~~	NA	NA	NA
						2		@ 1.0 to 2.0 ft - color change to dark gray, moist, abundant wood pieces and vegetation debris, moderate odor unknown - Reducing-like			
						3	ML		0	0	100
						4					
		CB		5/5	5-10	5	SW	3.0 to 4.0 ft SILT, moist, gray to brown, no plasticity, stiff, trace unknown odor	40	60	0
						6		4.0 to 7.0 ft ~~SAND~~ slightly moist, brown, loose, GRAVELLY well graded fine to coarse sand, well graded, fine to coarse, well rounded gravel.			
						7			70	20	10
						8	GW-GM				
						9		7.0 to 25.0 ft (TD) SANDY GRAVEL with silt, ~~light~~ gray-brown, loose, dry, well graded fine to coarse, well rounded gravel			
1000		CB		4.1/5.0	10-15	10					
						1					
						2		@ 12.9 ft - Moist			
						3					
						4					
						15					
1006		CB		4.4/5.0	15-20	6					
						7					
						▽8		@ 18 feet - Wet			
						9					
						20					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains

DSO = Dirty Sock Odor AOPP = As on Previous Page

SAA = Same as above Δ = change

Coordinates: 48.0488196 -123.1437263O

ANCHOR QEA

BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2
PROJECT NUMBER:	201439-01
GEOLOGIST/ENGINEER:	Matt Wilson
DRILLING CONTRACTOR:	Cascade Drilling John Wright
DRILLING METHOD:	Sonic TSI-150
HOLE DIAMETER:	6 inches

BORING ID:	SB-2
DATE BEGAN:	5/6/21
DATE COMPLETED:	5/6/21
TOTAL DEPTH (FT):	25
PAGE	2 **OF** 2

SAMPLING METHOD 4 in. ID by 5 ft core barrel (CB)

Field location of boring

See Page 1

TIME	WELL DETAILS	SAMPLING METHOD		RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
1049		CB		4.4/5	20-25	1	GW-GM	@ 20 ft - color Δ to light brown	70	20	10
						2		@ 23.6 to 24.4 ft - light gray laminations and bandings (volcanic ash?)			
						3					
						4					
						25					
						6		TD at 25 ft			
						7					
						8					
						9					
						30					
						1					
						2					
						3					
						4					
						5					
						6					
						7					
						8					
						9					
						0					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains

DSO = Dirty Sock Odor AOPP = As on Previous Page

SAA = Same as above Δ = change

ANCHOR QEA

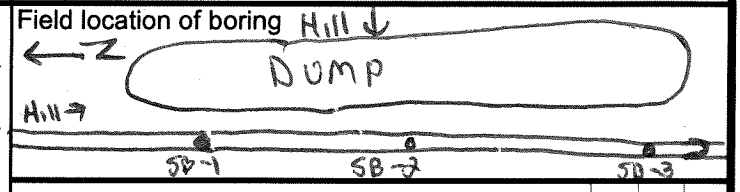
BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2
PROJECT NUMBER:	201439-01
GEOLOGIST/ENGINEER:	Matt Wilson
DRILLING CONTRACTOR:	Cascade Drilling John Wright
DRILLING METHOD:	Sonic TSI-150
HOLE DIAMETER:	4 inches

BORING ID:	SB-3
DATE BEGAN:	5/6/21
DATE COMPLETED:	
TOTAL DEPTH (FT):	25.0 ft
PAGE	1 OF 2

SAMPLING METHOD 4 in. ID by 5 ft core barrel (CB)

Field location of boring



TIME	WELL DETAILS	SAMPLING METHOD	RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
0843		CB	3.8/5	0-5	1	~~SW~~ GM	0 to 2.6 ft Silty sandy Gravel - Roadbase dry, loose	60	20	20
					2					
					3	GW	2.6 to 4.2 ft - Sandy gravel, dry, loose, dark brown, well graded fine to coarse gravel, fine sand	80	20	0
					4					
					5	SW	4.2 to 5.0 ft Sand, dark gray brown, loose, dry, well graded, fine to coarse grained, majority medium grained well rounded gravel	0	100	0
0850		CB	2.5/5	5-10	6	GW-GM	@ 5.0 ft - dark red oxidation layer	60	30	10
					7		5.0 to 15.0 ft Sandy Gravel with Silt, dark gray brown, loose, dry, well graded fine to ~~coarse~~ cobble sized, well rounded gravel, fine to coarse sand			
					8					
					9					
0857		CB	2.0/5.0	10-15	10					
					11					
					12		@ 12.0 ft - cobble blocked core barrel - no recovery from 12-15 ft			
					13					
					14					
					15		@ 15 ft - increased silt content; soil name Δ to Silty Sandy Gravel all else same as above	60	~~15~~ 20	15 20
		CB	5.3/5	15-20	16	GM	@ 16 ft - Moist to wet color Δ to light brown			
					17					
					18					
					19					
					20					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains
DSO = Dirty Sock Odor AOPP = As on Previous Page
SAA = Same as above Δ = change

Coordinates: 48.045098 51 -123.142229 81

ANCHOR QEA

BORING LOG

CLIENT/PROJECT NAME:	Dungeness Reservoir Phase 2
PROJECT NUMBER:	201439-01
GEOLOGIST/ENGINEER:	Matt Wilson
DRILLING CONTRACTOR:	Cascade Drilling John Wright
DRILLING METHOD:	Sonic TSI - 150
HOLE DIAMETER:	4 inches

BORING ID:	SB-3
DATE BEGAN:	5/6/21
DATE COMPLETED:	5/6/21
TOTAL DEPTH (FT):	25
PAGE	2 OF 2

SAMPLING METHOD 4 in. ID by 5 ft core barrel (CB)

Field location of boring: See Page 1

TIME	WELL DETAILS	SAMPLING METHOD		RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	FNS %
0920		CB		5.0/5.0	20 - 25	1	GM	Silty Sandy Gravel, AOPP	60	20	20
						2					
						3					
						4					
						25					
						6		TD @ 25.0 ft			
						7					
						8					
						9					
						30					
						1					
						2					
						3					
						4					
						5					
						6					
						7					
						8					
						9					
						0					

Remarks:

No O = No Discernible Odor; No S = No Sheen; HC = hydrocarbon; variegated = black, grey, clear, white, red, and green sand grains

DSO = Dirty Sock Odor; AOPP = As on Previous Page

SAA = Same as above; Δ = change

Total Depth:	25 ft.	Northing:		Drilling Method:	Sonic Core	Hole Diam.:	4 in.
Top Elevation:	~ 418 ft.	Easting:		Drilling Company:	Holt Services	Rod Diam.:	
Vert. Datum:	NAVD88	Station:		Drill Rig Equipment:	Terra Sonic 150	Hammer Type:	
Horiz. Datum:		Offset:		Other Comments:	Track-Mounted Drill		

SOIL DESCRIPTION

Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines indicated below represent the approximate boundaries between material types, and the transition may be gradual.

Depth, ft.	Soil Description
2.0	Brown to light gray, *Poorly Graded, Fine to Coarse Gravel with Silt and Sand (GP-GM)*; moist; cobbles and boulders; nonplastic. (Hf)
2.8	
5.0	Dark brown, *Silty, Fine to Medium Sand with Gravel (SM)*; moist; low plasticity; organics. (Old Topsoil)
7.5	Brown, *Poorly Graded Gravel (Fine to Coarse) with Silt and Sand (GP-GM)*; moist; gravel zones; nonplastic.
12.0	Brown, *Silty Sand with Gravel (SM)*; moist; low plasticity; fine to coarse.
13.0	Brown, *Poorly Graded Gravel with Silt and Sand (GP-GM)* to *Silty Gravel with Sand (GM)*; moist; few cobbles; fine to coarse gravel and sand; nonplastic to low plasticity. - Cobbles at 8.5 feet.
15.0	Cobbles.
	Interbedded, *Poorly Graded Gravel with Silt and Sand (GP-GM)* and *Silty Gravel with Sand (GM)*; moist; fine to coarse gravel and sand; nonplastic to low plasticity.
25.0	Brown-gray, *Silty Gravel with Sand (GM)*; moist to wet; cobbles; fine to coarse gravel; fine to medium sand; low to medium plasticity. - Wet at 18 feet.
	BOTTOM OF SONIC CORE COMPLETED 9/23/2021

Symbol; Samples: R-1, R-2, R-3, R-4; Ground Water: 10/19/2021

◇ % Fines (<0.075mm)
● % Water Content

0 20 40 60

5 10 15 20 25 30 35

0 20 40 60

LEGEND

* Sample Not Recovered
Soil Core (as in Sonic Core Borings)
Well Screen and Sand Filter
Bentonite-Cement Grout
Bentonite Chips/Pellets
Bentonite Grout
Ground Water Level in Well

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.

Dungeness Off-Channel Reservoir
Sequim, Washington

LOG OF SONIC CORE SB-3

October 2021 104680-101

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-7

REV 0 - Log in Progress

MASTER LOG E 104680.GPJ SHAN WIL.GDT 10/22/21 Log: DPO Rev: DPO Typ: LKN

Appendix C
Field Sampling Data Sheets

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6720 S Macadam Ave, Suite 125, Portland, OR 97219
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Dungeness Reservoir Phase 2 **WELL ID:** SB-1
SITE ADDRESS: Sequim, Wa **BLIND ID:** SB1-GW-050621
DUP ID: Time:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY

WEATHER:	SUNNY	PRTLY CLDY	CLOUDY	RAIN	No Wind	TEMPERATURE:	65 °F

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DTW (feet ~~btoc~~)	Correction Factor	Corrected DTW	DTB (ft ~~btoc~~)	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
5/06/21	15:15	~~22.17~~	—	—	22.80	2.98	X 1	0.52
/ /	:	19.82					X 3	1.56

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.174	6" = 1.469	8" = 2.611	10" = 4.080

§ METHODS: (A) Dedicated Submersible Pump **(B) Peristaltic Pump** (C) Bladder Pump (D) Waterra inertial pump (E) Dedicated Pneumatic Pump (F) Other_____

GROUNDWATER SAMPLING DATA

Bottle Type	Date	Time	Method §	#	Volume	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	5/06/21	16:00	B	6	40 ml	HCL	YES	NO	---	✓
Red Poly-total	/ /	:		1	125 ml ~~250 ml~~ 500 ml	HNO_3	YES	NO	---	✓
Red Poly-dissolved	/ /	:		1	125 ml ~~250 ml~~ 500 ml	HNO_3	YES	~~NO~~ YES	---	✓
Amber Glass	/ /	:		2	125 ml 250 ml 500 ml	None	YES	NO	---	✓
Amber Glass	/ /	:		2	125 ml 250 ml 500 ml	HCL	YES	NO	---	✓

Total Bottles (include duplicate count): 12 **MS & MSD** (circle if collected)

BOTTLE TYPE	ANALYSIS PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA Glass	8260C VOC NWTPH-Gx
Amber Glass	NWTPH-Dx 8270D PAH SIM
YELLOW - Poly	~~Ammonia (SM 4500-NH3 C) TKN (351.2) Total Phosphorus (SM 4500-P E)~~
RED TOTAL - Poly	6020A 7470A/Hg (13 priority metals)
RED DISSOLVED - Poly	6020A 7470A/Hg (13 priority metals)

WATER QUALITY DATA Purge Start Time: Pump stop time:

Meas.	Method §	Time (elapsed)	Purged (gal) (L)	DTW (ft) btoc	Temp (°C)	DO (mg/l)	Spec Cond (µS/cm)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)	Water clarity/color
1	B	3	1.0	23.57	15.8	4.10	305.6	6.98	22.6	>750	cloudy, brown
2		6	1.6	24.15	15.9	3.40	311.6	6.92	-19.6		
3		9	2.0	24.40	15.8	3.82	307.5	6.92	-54.3		
4		12	2.4	24.40	15.9	4.53	304.5	6.85	-20.6		
5		15	2.8	24.40	15.6	4.63	299.4	6.82	-13.1	656	
6		18	3.1	24.40	15.5	4.76	296.4	6.80	-16.4	529	SI cloudy, brown tint
7		21	3.5	24.40	15.4	4.57	295.5	6.81	-9.6	316	
8		27	4.3	24.40	15.0	4.95	289.9	6.77	-14.4	458	
9					after sampling completed					425	
10											

[Select A-G] [Cumulative Totals]

Comments:

ft btoc = feet below top of casing DTW = depth to water DTB = depth to bottom

SAMPLER: Matt Wilson (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6720 S Macadam Ave, Suite 125, Portland, OR 97219
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Dungeness Reservoir Phase 2 **WELL ID:** SB-2

SITE ADDRESS: Sequim, Wa **BLIND ID:** SB2-GW-050621

DUP ID: Time:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY

WEATHER:	SUNNY	PRTLY CLDY	CLOUDY	RAIN	No Wind	TEMPERATURE:	60 °F

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DTW (feet btoc)	Correction Factor	Corrected DTW	DTB (ft btoc)	DTB-DTW	[Water Column]	[Water Column x Gal/ft] Volume (gal)
5/06/21	11:24	17.59	—	—	22.10	4.51	X 1	0.78
/ /	:						X 3	2.34

Gal/ft = (dia./2)^2 x 0.163 | 1" = 0.041 | 2" = 0.174 | 6" = 1.469 | 8" = 2.611 | 10" = 4.080

§ METHODS: (A) Dedicated Submersible Pump (B) Peristaltic Pump (C) Bladder Pump (D) Waterra inertial pump (E) Dedicated Pneumatic Pump (F) Other_____

GROUNDWATER SAMPLING DATA

Bottle Type	Date	Time	Method §	#	Volume	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	5/06/21	12:30	B	6	40 ml	HCL	YES	NO	---	✓
Red Poly-total	/ /	:		1	125 ml 250 ml 500 ml	HNO_3	YES	NO	---	✓
Red Poly-dissolved	/ /	:		1	125 ml 250 ml 500 ml	HNO_3	YES	~~NO~~ YES	---	✓
Amber Glass	/ /	:		2	125 ml 250 ml 500 ml	None	YES	NO	---	✓
Amber Glass	/ /	:		2	125 ml 250 ml 500 ml	HCL	YES	NO	---	✓

Total Bottles (include duplicate count) 12 **MS & MSD** (circle if collected)

BOTTLE TYPE	ANALYSIS PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA Glass	8260C VOC NWTPH-Gx
Amber Glass	NWTPH-Dx 8270D PAH SIM
YELLOW - Poly	~~Ammonia (SM 4500 NH3 G) TKN (351.2) Total Phosphorus (SM 4500 P E)~~
RED TOTAL - Poly	6020A 7470A/Hg (13 priority metals)
RED DISSOLVED - Poly	6020A 7470A/Hg (13 priority metals)

WATER QUALITY DATA Purge Start Time: Pump stop time:

Meas.	Method § [Select A-G]	Time (elapsed)	Purged (gal)(L) [Cumulative Totals]	btoc DTW (ft)	Temp (°C)	DO (mg/l)	Spec Cond (µS/cm)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)	Water clarity/color
1	3	B	0.5	20.98	14.2	3.26	276.1	6.80	86.1	>750	cloudy, brown
2	6		1.0	21.11	13.1	3.78	262.2	6.81	74.5		
3	9		1.4	21.36	13.0	3.65	266.1	6.83	61.9		
4	12		1.8	21.67	13.7	3.28	265.6	6.89	43.3		
5	15		2.2	21.88	13.7	3.23	268.5	6.92	28.6		
6	30		3.7	22.55	14.0	2.76	278.6	6.97	-24.4		
7	33		4.1	22.65	14.2	2.68	279.9	6.97	-35.0		
8	36		4.4	22.66	14.4	2.59	283.3	6.98	-44.0		
9	39		4.8	22.70	14.1	2.52	290.4	7.00	-59.6		
10					after Sample collected					283	sl cloudy, lt brown tint

Comments:

ft btoc = feet below top of casing DTW = depth to water DTB = depth to bottom

SAMPLER: Matt Wilson (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6720 S Macadam Ave, Suite 125, Portland, OR 97219
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Dungeness Reservoir Phase 2 **WELL ID:** SB-3
SITE ADDRESS: Sequim, Wa **BLIND ID:** SB3-GW-050621
DUP ID: Time:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		PRTLY CLDY		CLOUDY		RAIN		No Wind	**TEMPERATURE:**	60 °F

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DTW (feet ~~btoc~~ bgs)	Correction Factor	Corrected DTW	DTB (ft btoc)	DTB-DTW	[Water Column]	[Water Column x Gal/ft] Volume (gal)
5/06/21	11:30	16.67	—	—	—	—	X 1	—
/ /	:						X 3	—

Gal/ft = (dia./2)² x 0.163	1" = 0.041	(2" = 0.174)	6" = 1.469	8" = 2.611	10" = 4.080

§ METHODS: (A) Dedicated Submersible Pump **(B) Peristaltic Pump** (C) Bladder Pump (D) Waterra inertial pump (E) Dedicated Pneumatic Pump (F) Other_____

GROUNDWATER SAMPLING DATA

Bottle Type	Date	Time	Method §	#	Volume	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	5/06/21	14:45	B	6	(40 ml)	HCL	YES	NO	—	✓
Red Poly-total	/	:		1	(125 ml) 250 ml 500 ml	HNO_3	YES	NO	—	✓
Red Poly-dissolved	/	:		1	(125 ml) 250 ml 500 ml	HNO_3	YES	~~NO~~ YES	—	✓
Amber Glass	/	:		1	125 ml 250 ml (500 ml)	None	YES	NO	—	✓
Amber Glass	/	:		1	125 ml 250 ml (500 ml)	HCL	YES	NO	—	✓

Total Bottles (include duplicate count): (10) **MS & MSD** (circle if collected)

BOTTLE TYPE	ANALYSIS PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA Glass	8260C VOC NWTPH-Gx
Amber Glass	NWTPH-Dx 8270D PAH SIM
YELLOW - Poly	~~Ammonia (SM 4500-NH3 C) TKN (351.2) Total Phosphorus (SM 4500-P E)~~
RED TOTAL - Poly	6020A 7470A/Hg (13 priority metals)
RED DISSOLVED - Poly	6020A 7470A/Hg (13 priority metals)

WATER QUALITY DATA Purge Start Time: — Pump stop time: —

Meas.	Method §	Time (elapsed)	Purged (gal)(L)	~~Btoc~~ DTW (ft)	Temp (°C)	DO (mg/l)	Spec Cond (µS/cm)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)	Water clarity/color
1	B	9	0.75	18.60	10.8	1.02	359.8	7.11	-150.4	>750	cloudy, brown
2	B	12	1.05	18.91	11.5	1.72	358.6	7.22	-145.7	⊗ ↓	
3	B	15	1.3	19.23	11.4	1.72	361.2	7.20	-158.3	↓	
4					after sampling		complete			658	SI cloudy, brown tint
5											
6											
7											
8											
9											
10											
	[Select A-G]		[Cumulative Totals]								

Comments: Only 1 500 ml Amber of each type collected — borehole did not produce much water

ft btoc = feet below top of casing DTW = depth to water DTB = depth to bottom

SAMPLER: Matt Wilson (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6720 S Macadam Ave, Suite 125, Portland, OR 97219
Office: (503) 670-1108 Fax: (503) 670-1128

SB-3

PROJECT NAME: Dungeness Reservoir - Old Sequim Dump
WELL ID: Sequim Dump Well
SITE ADDRESS: River Road, Sequim, WA
BLIND ID: ~~DR-101221-01~~ DR-101321-01
DUP ID: ~~DR-101221-02~~ DR-Time101321-02

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY 0905
WEATHER:	SUNNY		PRTLY CLDY		CLOUDY		RAIN		No Wind	TEMPERATURE:	45 °F

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DTW (feet btoc)	Correction Factor	Corrected DTW	DTB (ft btoc)	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/12/21	08:27	17.76	—	—	24.53	6.77	X 1	~~1.78~~ 1.18
/ /	:						X 3	3.54

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.174	6" = 1.469	8" = 2.611	10" = 4.080

§ METHODS: (A) Dedicated Submersible Pump **(B) Peristaltic Pump** (C) Bladder Pump (D) Waterra inertial pump (E) Dedicated Pneumatic Pump (F) Other_____

GROUNDWATER SAMPLING DATA

Bottle Type	Date	Time	Method §	#	Volume	Preservative [circle]	Ice	Filter	pH	[√ if used] √
Amber Glass	10/12/21	09:00	B	~~2~~ 4	1 Liter	HCL	YES	NO	---	✓
Red Poly-total	/ /	:		1	125 ml **250 ml** 500 ml	HNO_3	YES	NO	---	✓
Red Poly-dissolved	/ /	:		1	125 ml **250 ml** 500 ml	HNO_3	YES	YES	---	✓

Total Bottles (include duplicate count): 6 **MS & MSD** (circle if collected)

BOTTLE TYPE	ANALYSIS PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
Amber Glass	TPH-Dx (with Silica Gel) TPH-Dx (no silica gel)
Red Total - Poly	Total Metals (RCRA 8 - Ag, As, Ba, Cd, Cr, Hg, Pb, Se)
Red Dissolved - Poly	Dissolved Metals (RCRA 8 - Ag, As, Ba, Cd, Cr, Hg, Pb, Se)

WATER QUALITY DATA Purge Start Time: 0845 Pump stop time:

Meas.	Method §	Time (elapsed)	Purged (gal)(L)	DTW (ft)	Temp (°C)	DO (mg/l)	Spec Cond (µS/cm)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)	Water clarity/color
1	B	—	—	20.09	—	—	—	—	—	—	—
2		3	1.6	20.32	9.2	7.22	178.0	6.49	145.5	20.0	clear, colorless
3		6	2.7	20.31	9.2	7.13	174.7	6.58	140.0	11.4	↓ ↓
4		9	3.8	20.31	9.2	7.23	174.1	6.62	136.4	8.85	↓ ↓
5		12	4.8	↓	9.2	7.12	174.1	6.64	133.1	9.50	↓ ↓
6		15	6.0	↓	9.2	7.01	174.5	6.66	130.2	12.1	↓ ↓
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											

[Select A-G] [Cumulative Totals]

MW 10/13/21

Comments: ~~DR-101~~ DR-101221-02

ft btoc = feet below top of casing DTW = depth to water DTB = depth to bottom

SAMPLER: M. Will

SB-3

WELL DEVELOPMENT FORM

ANCHOR QEA

Project Name:	Dungeness Reservoir - Old Sequim Dump	Dates: 10/12/21	Well ID: Old Sequim Dump Well
Project #:	201439-01.02	Initial DTB: ~~24.37~~ 24.24	Final DTB: 24.53
Location:	Sequim, WA	Initial DTW: 17.72 ft	Final DTW: 17.76 ft
Development Method:	Surging w/ waterra	Feet of water in well:	6.52
Total Volume Removed:	17.5 Gallons Purge w/ Pump	Casing Diameter Volume (G):	2"= 0.174 4"= 0.661 6"= 1.500 8"= 2.611
Technician:	Matt Wilson	Casing Volume:	1.13 Gallons
		10x Casing Volume:	11.3 Gallons
Estimate of specific capacity or recharge to well (GPM/ft drawdown):			Page 1 of ____

Date	Time	Cum. Vol. Removed (gallons)	Temp (°C)	Spec Cond (µS/cm)	pH (Standard Units)	DTW (ft TOC)	Turbidity (NTUs)	Appearance/Comments
10/12/21	1423	0	—	—	—	17.72	—	Surging & Purging
	1433	2	—	—	—	—	>750	Brown, turbid (surging only)
	1505	5	—	—	—		>750	Purging only
	1530	10	—	—	—	17.87	>750	Surging & Purging
	1544	11	9.7	200.7	6.76	17.80	>750	cloudy, brown (Purge only)
	1550	12	9.6	193.8	6.75	17.78	>750	cloudy, brown
	1600	13	9.5	190.0	6.74	17.78	>750	↓ ↓
	1610	14	9.6	186.3	6.72	17.78	>750	cloudy, Lt brown
	1624	15	9.6	184.3	6.70	17.78	160	SI cloudy, lt pale tint
	1640	16.5	9.6	183.5	6.69	↓	104	↓ ↓
	1650	17	9.5	183.8	6.71	↓	230	↓ ↓
	1700	17.5	9.5	183.5	6.70	↓	96.4	clear colorless
		Development complete						

Appendix D
Analytical Laboratory Testing Reports

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

June 08, 2021

Analytical Report for Service Request No: K2105233

Matt Wilson
Anchor QEA, LLC
6720 S. Macadam Avenue
Suite 125
Portland, OR 97219

RE: Dungeness Reservoir Phase 2 / 201439-01.02

Dear Matt,

Enclosed are the results of the sample(s) submitted to our laboratory May 11, 2021
For your reference, these analyses have been assigned our service request number **K2105233.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ALS Environmental
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1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS Environmental

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2
Sample Matrix: Water

Service Request: K2105233
Date Received: 05/11/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Four water samples were received for analysis at ALS Environmental on 05/11/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Semivoa GC:

No significant anomalies were noted with this analysis.

Metals:

Method 6020A, 06/08/2021: The matrix spike recovery of Antimony for sample SB1-GW-050621 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

Volatiles by GC/MS:

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0517F002.D: Dichlorodifluoromethane and Naphthalene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.
Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS13\0519F004.D. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.
The laboratory received only one vial of the Trip Blank TB1-050621 and therefore had to be used for more than one analysis. The vial was used for NWTPH-Gx first then days later, when discovered there was only one vial 8260C. The vial had headspace for ~ 1 week. No corrective action was possible.

Approved by Noe D. Oan Date 06/08/2021

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

LABORATORY NAME:	ALS Kelso
LABORATORY ADDRESS:	1317 S 13th Ave Kelso WA 98626
LABORATORY PHONE:	360 577 7222

Work Order No.: K2105233

Project Manager:	Matt Wilson	**Bill to:**	
Client Name:	Anchor QEA, LLC	**Company:**	Anchor QEA, LLC
Address:	6720 S Macadam Ave Suite 125	**Email:**	labdata@anchorqea.com
City, State ZIP:	Portland OR 97219		
Email:	mwilson@anchorqea.com	**Phone:**	503-670-1108
Project Name:	Dungeness Reservoir Phase 2		
Project Number:	201439-01.02		
P.O. Number:	201439-01.02		
Sampler's Name:	M. Wilson		

SAMPLE RECEIPT

Temperature (°C):			Temp Blank Present		
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	

REQUESTED ANALYSIS

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals - total	6020A Priority 13 metals - dissolved	7470A - Hg total	7470A - Hg dissolved	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx			Comments
SB1-GW-050621	W	5/06/21	1600		12	X	X	X	X	X	X	X	X			
SB2-GW-050621	↓	↓	1230		12	X	X	X	X	X	X	X	X			
SB3-GW-050621	↓	↓	1445		10	X	X	X	X	X	X	X	X			
TB 1	W	—	—		1							X	X			

W 5/06/21

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson	Matt Wil	5/11/21 0915	KMorrow ALS		5/11/21 0915

Relinquished: KMorrow ALS 5/11/21 1230 Rec: KMorrow ALS 5/11/21 1230

Revised: 5/5/2021

PM MH

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K21 052233

Received: 5/11/21 Opened: 5/11/21 By: [illegible] Unloaded: 5/11/21 By: [illegible]

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number (NA)	Filed
2.9		HG1		—	—		
5.0		"					
2.4		"					
3.4		"					

6. Packing material: (*Inserts*) (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers ~~properly~~ filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: ~~Did not receive WTPH-Dx bottles (500ml HCl - amber) for SB3-GW-050621~~ 5/11

Metals

ALS Environmental—Kelso Laboratory
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ALS Group USA, Corp.
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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Basis:**	NA
Lab Code:	K2105233-001		

Dissolved Metals

Analyte Name	Analysis Method	Result	Q	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.137**		ug/L	0.050	0.020	1	06/08/21 11:57	06/03/21	
Arsenic	6020A	**0.25**	**J**	ug/L	0.50	0.09	1	06/08/21 11:57	06/03/21	
Beryllium	6020A	ND	U	ug/L	0.020	0.005	1	06/08/21 11:57	06/03/21	
Cadmium	6020A	**0.025**		ug/L	0.020	0.008	1	06/08/21 11:57	06/03/21	
Chromium	6020A	**0.15**	**J**	ug/L	0.20	0.03	1	06/08/21 11:57	06/03/21	
Copper	6020A	**0.87**		ug/L	0.10	0.05	1	06/08/21 11:57	06/03/21	
Lead	6020A	**0.019**	**J**	ug/L	0.020	0.006	1	06/08/21 11:57	06/03/21	
Mercury	7470A	ND	U	ug/L	0.20	0.008	1	06/01/21 15:45	05/28/21	
Nickel	6020A	**0.99**		ug/L	0.20	0.04	1	06/08/21 11:57	06/03/21	
Selenium	6020A	**0.2**	**J**	ug/L	1.0	0.2	1	06/08/21 11:57	06/03/21	
Silver	6020A	ND	U	ug/L	0.020	0.009	1	06/08/21 11:57	06/03/21	
Thallium	6020A	ND	U	ug/L	0.020	0.009	1	06/08/21 11:57	06/03/21	
Zinc	6020A	**6.8**		ug/L	2.0	0.5	1	06/08/21 11:57	06/03/21	

ALS Group USA, Corp.
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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Basis:**	NA
Lab Code:	K2105233-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.196**	ug/L	0.050	0.020	1	06/08/21 11:37	06/03/21	
Arsenic	6020A	**3.08**	ug/L	0.50	0.09	1	06/08/21 11:37	06/03/21	
Beryllium	6020A	**0.267**	ug/L	0.020	0.005	1	06/08/21 11:37	06/03/21	
Cadmium	6020A	**0.094**	ug/L	0.020	0.008	1	06/08/21 11:37	06/03/21	
Chromium	6020A	**25.2**	ug/L	0.20	0.03	1	06/08/21 11:37	06/03/21	
Copper	6020A	**29.5**	ug/L	0.10	0.05	1	06/08/21 11:37	06/03/21	
Lead	6020A	**4.69**	ug/L	0.020	0.006	1	06/08/21 11:37	06/03/21	
Mercury	7470A	ND U	ug/L	0.20	0.008	1	06/01/21 17:22	05/28/21	
Nickel	6020A	**25.6**	ug/L	0.20	0.04	1	06/08/21 11:37	06/03/21	
Selenium	6020A	**0.3 J**	ug/L	1.0	0.2	1	06/08/21 11:37	06/03/21	
Silver	6020A	**0.121**	ug/L	0.020	0.009	1	06/08/21 11:37	06/03/21	
Thallium	6020A	**0.042**	ug/L	0.020	0.009	1	06/08/21 11:37	06/03/21	
Zinc	6020A	**37.0**	ug/L	2.0	0.5	1	06/08/21 11:37	06/03/21	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Basis:**	NA
Lab Code:	K2105233-002		

Dissolved Metals

Analyte Name	Analysis Method	Result	Q	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.104**		ug/L	0.050	0.020	1	06/08/21 11:59	06/03/21	
Arsenic	6020A	**0.20**	**J**	ug/L	0.50	0.09	1	06/08/21 11:59	06/03/21	
Beryllium	6020A	ND	U	ug/L	0.020	0.005	1	06/08/21 11:59	06/03/21	
Cadmium	6020A	ND	U	ug/L	0.020	0.008	1	06/08/21 11:59	06/03/21	
Chromium	6020A	**0.15**	**J**	ug/L	0.20	0.03	1	06/08/21 11:59	06/03/21	
Copper	6020A	**0.58**		ug/L	0.10	0.05	1	06/08/21 11:59	06/03/21	
Lead	6020A	**0.012**	**J**	ug/L	0.020	0.006	1	06/08/21 11:59	06/03/21	
Mercury	7470A	ND	U	ug/L	0.20	0.008	1	06/01/21 15:48	05/28/21	
Nickel	6020A	**0.78**		ug/L	0.20	0.04	1	06/08/21 11:59	06/03/21	
Selenium	6020A	**0.3**	**J**	ug/L	1.0	0.2	1	06/08/21 11:59	06/03/21	
Silver	6020A	ND	U	ug/L	0.020	0.009	1	06/08/21 11:59	06/03/21	
Thallium	6020A	ND	U	ug/L	0.020	0.009	1	06/08/21 11:59	06/03/21	
Zinc	6020A	**2.2**		ug/L	2.0	0.5	1	06/08/21 11:59	06/03/21	

ALS Group USA, Corp.
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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Basis:**	NA
Lab Code:	K2105233-002		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.242**	ug/L	0.050	0.020	1	06/08/21 11:48	06/03/21	
Arsenic	6020A	**3.51**	ug/L	0.50	0.09	1	06/08/21 11:48	06/03/21	
Beryllium	6020A	**0.251**	ug/L	0.020	0.005	1	06/08/21 11:48	06/03/21	
Cadmium	6020A	**0.081**	ug/L	0.020	0.008	1	06/08/21 11:48	06/03/21	
Chromium	6020A	**24.0**	ug/L	0.20	0.03	1	06/08/21 11:48	06/03/21	
Copper	6020A	**29.7**	ug/L	0.10	0.05	1	06/08/21 11:48	06/03/21	
Lead	6020A	**4.67**	ug/L	0.020	0.006	1	06/08/21 11:48	06/03/21	
Mercury	7470A	ND	U ug/L	0.20	0.008	1	06/01/21 15:40	05/28/21	
Nickel	6020A	**25.0**	ug/L	0.20	0.04	1	06/08/21 11:48	06/03/21	
Selenium	6020A	**0.3**	**J** ug/L	1.0	0.2	1	06/08/21 11:48	06/03/21	
Silver	6020A	**0.177**	ug/L	0.020	0.009	1	06/08/21 11:48	06/03/21	
Thallium	6020A	**0.050**	ug/L	0.020	0.009	1	06/08/21 11:48	06/03/21	
Zinc	6020A	**33.8**	ug/L	2.0	0.5	1	06/08/21 11:48	06/03/21	

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Basis:**	NA
Lab Code:	K2105233-003		

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.192**	ug/L	0.050	0.020	1	06/08/21 12:02	06/03/21	
Arsenic	6020A	**0.17 J**	ug/L	0.50	0.09	1	06/08/21 12:02	06/03/21	
Beryllium	6020A	ND U	ug/L	0.020	0.005	1	06/08/21 12:02	06/03/21	
Cadmium	6020A	**0.043**	ug/L	0.020	0.008	1	06/08/21 12:02	06/03/21	
Chromium	6020A	**0.16 J**	ug/L	0.20	0.03	1	06/08/21 12:02	06/03/21	
Copper	6020A	**0.92**	ug/L	0.10	0.05	1	06/08/21 12:02	06/03/21	
Lead	6020A	**0.022**	ug/L	0.020	0.006	1	06/08/21 12:02	06/03/21	
Mercury	7470A	ND U	ug/L	0.20	0.008	1	06/01/21 15:55	05/28/21	
Nickel	6020A	**2.02**	ug/L	0.20	0.04	1	06/08/21 12:02	06/03/21	
Selenium	6020A	**0.2 J**	ug/L	1.0	0.2	1	06/08/21 12:02	06/03/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	06/08/21 12:02	06/03/21	
Thallium	6020A	**0.018 J**	ug/L	0.020	0.009	1	06/08/21 12:02	06/03/21	
Zinc	6020A	**9.6**	ug/L	2.0	0.5	1	06/08/21 12:02	06/03/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Basis:**	NA
Lab Code:	K2105233-003		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.486**	ug/L	0.050	0.020	1	06/08/21 11:50	06/03/21	
Arsenic	6020A	**6.16**	ug/L	0.50	0.09	1	06/08/21 11:50	06/03/21	
Beryllium	6020A	**0.563**	ug/L	0.020	0.005	1	06/08/21 11:50	06/03/21	
Cadmium	6020A	**0.304**	ug/L	0.020	0.008	1	06/08/21 11:50	06/03/21	
Chromium	6020A	**52.1**	ug/L	0.20	0.03	1	06/08/21 11:50	06/03/21	
Copper	6020A	**92.0**	ug/L	0.10	0.05	1	06/08/21 11:50	06/03/21	
Lead	6020A	**10.5**	ug/L	0.020	0.006	1	06/08/21 11:50	06/03/21	
Mercury	7470A	**0.05**	ug/L	0.20	0.008	1	06/01/21 15:43	05/28/21	**J**
Nickel	6020A	**63.4**	ug/L	0.20	0.04	1	06/08/21 11:50	06/03/21	
Selenium	6020A	**0.3**	ug/L	1.0	0.2	1	06/08/21 11:50	06/03/21	**J**
Silver	6020A	**0.343**	ug/L	0.020	0.009	1	06/08/21 11:50	06/03/21	
Thallium	6020A	**0.111**	ug/L	0.020	0.009	1	06/08/21 11:50	06/03/21	
Zinc	6020A	**99.7**	ug/L	2.0	0.5	1	06/08/21 11:50	06/03/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ2110042-01		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	ug/L	0.050	0.020	1	06/08/21 11:32	06/03/21	
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	06/08/21 11:32	06/03/21	
Beryllium	6020A	ND U	ug/L	0.020	0.005	1	06/08/21 11:32	06/03/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	06/08/21 11:32	06/03/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	06/08/21 11:32	06/03/21	
Copper	6020A	ND U	ug/L	0.10	0.05	1	06/08/21 11:32	06/03/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	06/08/21 11:32	06/03/21	
Nickel	6020A	ND U	ug/L	0.20	0.04	1	06/08/21 11:32	06/03/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	06/08/21 11:32	06/03/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	06/08/21 11:32	06/03/21	
Thallium	6020A	ND U	ug/L	0.020	0.009	1	06/08/21 11:32	06/03/21	
Zinc	6020A	ND U	ug/L	2.0	0.5	1	06/08/21 11:32	06/03/21	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ2109486-01		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.008	1	06/01/21 17:18	05/28/21	

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	06/08/21

Replicate Sample Summary
Total Metals

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2110042-03 Result	Average	RPD	RPD Limit
Antimony	6020A	0.050	0.020	0.196	0.208	0.202	6	20
Arsenic	6020A	0.50	0.09	3.08	3.08	3.08	<1	20
Beryllium	6020A	0.020	0.005	0.267	0.271	0.269	1	20
Cadmium	6020A	0.020	0.008	0.094	0.087	0.091	8	20
Chromium	6020A	0.20	0.03	25.2	25.4	25.3	<1	20
Copper	6020A	0.10	0.05	29.5	29.7	29.6	<1	20
Lead	6020A	0.020	0.006	4.69	4.73	4.71	<1	20
Nickel	6020A	0.20	0.04	25.6	26.0	25.8	2	20
Selenium	6020A	1.0	0.2	0.3 J	0.3 J	0.3	<1	20
Silver	6020A	0.020	0.009	0.121	0.115	0.118	5	20
Thallium	6020A	0.020	0.009	0.042	0.038	0.040	10	20
Zinc	6020A	2.0	0.5	37.0	37.2	37.1	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Superset Reference:

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	06/01/21

Replicate Sample Summary
Total Metals

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2109486-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.20	0.008	ND U	ND U	ND	-	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Superset Reference:

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	06/8/21
		Date Extracted:	06/3/21

Matrix Spike Summary
Total Metals

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA
Analysis Method:	6020A		
Prep Method:	EPA CLP ILM04.0		

Matrix Spike
KQ2110042-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Antimony	0.196	6.43	10.0	62 N	75-125
Arsenic	3.08	46.1	50.0	86	75-125
Beryllium	0.267	2.67	2.50	96	75-125
Cadmium	0.094	24.9	25.0	99	75-125
Chromium	25.2	35.4	10.0	103	75-125
Copper	29.5	41.9	12.5	99	75-125
Lead	4.69	52.8	50.0	96	75-125
Nickel	25.6	49.9	25.0	97	75-125
Selenium	0.3 J	41.5	50.0	82	75-125
Silver	0.121	12.3	12.5	98	75-125
Thallium	0.042	46.7	50.0	93	75-125
Zinc	37.0	60.4	25.0	93	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	06/1/21
		Date Extracted:	05/28/21

Matrix Spike Summary
Total Metals

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ2109486-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	4.45	5.00	89	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2/201439-01.02
Sample Matrix: Water

Service Request: K2105233
Date Analyzed: 06/08/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2110042-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony	6020A	9.56	10.0	96	80-120
Arsenic	6020A	49.3	50.0	99	80-120
Beryllium	6020A	2.48	2.50	99	80-120
Cadmium	6020A	24.2	25.0	97	80-120
Chromium	6020A	9.57	10.0	96	80-120
Copper	6020A	12.2	12.5	98	80-120
Lead	6020A	48.2	50.0	96	80-120
Nickel	6020A	24.5	25.0	98	80-120
Selenium	6020A	50.9	50.0	102	80-120
Silver	6020A	11.8	12.5	94	80-120
Thallium	6020A	48.5	50.0	97	80-120
Zinc	6020A	24.8	25.0	99	80-120

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2/201439-01.02
Sample Matrix: Water

Service Request: K2105233
Date Analyzed: 06/01/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2109486-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	4.00	5.00	80	80-120

Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**150**	**J**	260	12	1	05/19/21 17:06	5/13/21	
Residual Range Organics (C25 - C36 RRO)	**360**	**J**	520	20	1	05/19/21 17:06	5/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	86	50 - 150	05/19/21 17:06	
n-Triacontane	85	50 - 150	05/19/21 17:06	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-002	**Basis:**	NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**190**	**J**	270	12	1	05/19/21 17:27	5/13/21	
Residual Range Organics (C25 - C36 RRO)	**200**	**J**	540	21	1	05/19/21 17:27	5/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	77	50 - 150	05/19/21 17:27	
n-Triacontane	76	50 - 150	05/19/21 17:27	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-003	**Basis:**	NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**710**	**Z**	270	12	1	05/19/21 17:49	5/13/21	
Residual Range Organics (C25 - C36 RRO)	**940**	**O**	530	21	1	05/19/21 17:49	5/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	85	50 - 150	05/19/21 17:49	
n-Triacontane	82	50 - 150	05/19/21 17:49	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2108268-03	**Basis:**	NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**14**	**J**	250	11	1	05/19/21 16:23	5/13/21	
Residual Range Organics (C25 - C36 RRO)	**37**	**J**	500	19	1	05/19/21 16:23	5/13/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	94	50 - 150	05/19/21 16:23	
n-Triacontane	93	50 - 150	05/19/21 16:23	

Client: Anchor QEA, LLC **Service Request:** K2105233

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx

Extraction Method: EPA 3510C

Sample Name	Lab Code	o-Terphenyl 50-150	n-Triacontane 50-150
SB1-GW-050621	K2105233-001	86	85
SB2-GW-050621	K2105233-002	77	76
SB3-GW-050621	K2105233-003	85	82
Method Blank	KQ2108268-03	94	93
Lab Control Sample	KQ2108268-02	100	93

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/19/21
Sample Matrix:	Water	**Date Extracted:**	05/13/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method:	NWTPH-Dx	**Units:**	ug/L
Prep Method:	EPA 3510C	**Basis:**	NA
		Analysis Lot:	724265

Lab Control Sample
KQ2108268-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	3450	3200	108	46-140
Residual Range Organics (C25 - C36 RRO)	1670	1600	104	45-159

Volatile Petroleum Products by GC/FID

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	05/12/21 14:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	101	50 - 150	05/12/21 14:10	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-002	**Basis:**	NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	**21.6 J**	250	12.0	1	05/12/21 14:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	101	50 - 150	05/12/21 14:56	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-003	**Basis:**	NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	**20.8** **J**	250	12.0	1	05/12/21 15:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	100	50 - 150	05/12/21 15:20	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	TB1-050621	**Units:**	ug/L
Lab Code:	K2105233-004	**Basis:**	NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	05/12/21 15:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	100	50 - 150	05/12/21 15:43	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2108127-05	**Basis:**	NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	05/12/21 11:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	101	50 - 150	05/12/21 11:01	

Client: Anchor QEA, LLC **Service Request:** K2105233

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx

Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene 50-150
SB1-GW-050621	K2105233-001	101
SB2-GW-050621	K2105233-002	101
SB3-GW-050621	K2105233-003	100
TB1-050621	K2105233-004	100
SB1-GW-050621	KQ2108127-02	101
Method Blank	KQ2108127-05	101
Lab Control Sample	KQ2108127-06	101
Duplicate Lab Control Sample	KQ2108127-07	99

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	05/12/21

Replicate Sample Summary

Volatile Petroleum Products by GC/FID

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2108127-02 Result	Average	RPD	RPD Limit
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	250	12.0	ND U	ND U	NC	NC	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/12/21
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method:	NWTPH-Gx	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	723147

	Lab Control Sample KQ2108127-06			Duplicate Lab Control Sample KQ2108127-07					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Gasoline Range Organics (Toluene-Naphthalene GRO)	502	500	100	493	500	99	80-119	2	30

Volatile Organic Compounds

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	**13**	**J**	20	3.3	1	05/17/21 12:27	
Benzene	**0.14**	**J**	0.50	0.062	1	05/17/21 12:27	
Bromobenzene	ND	U	2.0	0.12	1	05/17/21 12:27	
Bromochloromethane	ND	U	0.50	0.16	1	05/17/21 12:27	
Bromodichloromethane	ND	U	0.50	0.091	1	05/17/21 12:27	
Bromoform	ND	U	0.50	0.16	1	05/17/21 12:27	
Bromomethane	ND	U	0.50	0.16	1	05/17/21 12:27	
2-Butanone (MEK)	**3.0**	**J**	20	1.9	1	05/17/21 12:27	
n-Butylbenzene	ND	U	4.0	0.054	1	05/17/21 12:27	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/17/21 12:27	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/17/21 12:27	
Carbon Disulfide	**0.090**	**J**	0.50	0.069	1	05/17/21 12:27	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/17/21 12:27	
Chlorobenzene	ND	U	0.50	0.11	1	05/17/21 12:27	
Chloroethane	ND	U	0.50	0.16	1	05/17/21 12:27	
Chloroform	ND	U	0.50	0.072	1	05/17/21 12:27	
Chloromethane	ND	U	0.50	0.068	1	05/17/21 12:27	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/17/21 12:27	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/17/21 12:27	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/17/21 12:27	
Dibromochloromethane	ND	U	0.50	0.14	1	05/17/21 12:27	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/17/21 12:27	
Dibromomethane	ND	U	0.50	0.15	1	05/17/21 12:27	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:27	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/17/21 12:27	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:27	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/17/21 12:27	*
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/17/21 12:27	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/17/21 12:27	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/17/21 12:27	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/17/21 12:27	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/17/21 12:27	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/17/21 12:27	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/17/21 12:27	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/17/21 12:27	
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/17/21 12:27	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/17/21 12:27	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/17/21 12:27	
Ethylbenzene	ND	U	0.50	0.050	1	05/17/21 12:27	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/17/21 12:27	
2-Hexanone	ND	U	20	2.7	1	05/17/21 12:27	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND	U	2.0	0.051	1	05/17/21 12:27	
4-Isopropyltoluene	**0.38**	**J**	2.0	0.060	1	05/17/21 12:27	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	05/17/21 12:27	
Methylene Chloride	ND	U	2.0	0.10	1	05/17/21 12:27	
Naphthalene	ND	U	2.0	0.088	1	05/17/21 12:27	*
n-Propylbenzene	ND	U	2.0	0.054	1	05/17/21 12:27	
Styrene	ND	U	0.50	0.089	1	05/17/21 12:27	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	05/17/21 12:27	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	05/17/21 12:27	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	05/17/21 12:27	
Toluene	**0.20**	**J**	0.50	0.054	1	05/17/21 12:27	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	05/17/21 12:27	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	05/17/21 12:27	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	05/17/21 12:27	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	05/17/21 12:27	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	05/17/21 12:27	
Trichlorofluoromethane (CFC 11)	ND	U	0.50	0.12	1	05/17/21 12:27	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	05/17/21 12:27	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	05/17/21 12:27	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	05/17/21 12:27	
Vinyl Chloride	ND	U	0.50	0.075	1	05/17/21 12:27	
o-Xylene	ND	U	0.50	0.074	1	05/17/21 12:27	
m,p-Xylenes	ND	U	0.50	0.11	1	05/17/21 12:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	05/17/21 12:27	
Dibromofluoromethane	97	73 - 122	05/17/21 12:27	
Toluene-d8	100	65 - 144	05/17/21 12:27	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	**9.6**	**J**	20	3.3	1	05/17/21 12:54	
Benzene	**0.12**	**J**	0.50	0.062	1	05/17/21 12:54	
Bromobenzene	ND	U	2.0	0.12	1	05/17/21 12:54	
Bromochloromethane	ND	U	0.50	0.16	1	05/17/21 12:54	
Bromodichloromethane	ND	U	0.50	0.091	1	05/17/21 12:54	
Bromoform	ND	U	0.50	0.16	1	05/17/21 12:54	
Bromomethane	ND	U	0.50	0.16	1	05/17/21 12:54	
2-Butanone (MEK)	ND	U	20	1.9	1	05/17/21 12:54	
n-Butylbenzene	ND	U	4.0	0.054	1	05/17/21 12:54	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/17/21 12:54	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/17/21 12:54	
Carbon Disulfide	**0.11**	**J**	0.50	0.069	1	05/17/21 12:54	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/17/21 12:54	
Chlorobenzene	ND	U	0.50	0.11	1	05/17/21 12:54	
Chloroethane	ND	U	0.50	0.16	1	05/17/21 12:54	
Chloroform	ND	U	0.50	0.072	1	05/17/21 12:54	
Chloromethane	ND	U	0.50	0.068	1	05/17/21 12:54	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/17/21 12:54	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/17/21 12:54	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/17/21 12:54	
Dibromochloromethane	ND	U	0.50	0.14	1	05/17/21 12:54	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/17/21 12:54	
Dibromomethane	ND	U	0.50	0.15	1	05/17/21 12:54	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:54	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/17/21 12:54	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:54	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/17/21 12:54	*
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/17/21 12:54	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/17/21 12:54	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/17/21 12:54	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/17/21 12:54	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/17/21 12:54	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/17/21 12:54	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/17/21 12:54	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/17/21 12:54	
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/17/21 12:54	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/17/21 12:54	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/17/21 12:54	
Ethylbenzene	ND	U	0.50	0.050	1	05/17/21 12:54	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/17/21 12:54	
2-Hexanone	ND	U	20	2.7	1	05/17/21 12:54	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND	U	2.0	0.051	1	05/17/21 12:54	
4-Isopropyltoluene	**0.17**	**J**	2.0	0.060	1	05/17/21 12:54	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	05/17/21 12:54	
Methylene Chloride	ND	U	2.0	0.10	1	05/17/21 12:54	
Naphthalene	ND	U	2.0	0.088	1	05/17/21 12:54	*
n-Propylbenzene	ND	U	2.0	0.054	1	05/17/21 12:54	
Styrene	ND	U	0.50	0.089	1	05/17/21 12:54	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	05/17/21 12:54	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	05/17/21 12:54	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	05/17/21 12:54	
Toluene	**0.14**	**J**	0.50	0.054	1	05/17/21 12:54	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	05/17/21 12:54	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	05/17/21 12:54	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	05/17/21 12:54	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	05/17/21 12:54	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	05/17/21 12:54	
Trichlorofluoromethane (CFC 11)	ND	U	0.50	0.12	1	05/17/21 12:54	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	05/17/21 12:54	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	05/17/21 12:54	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	05/17/21 12:54	
Vinyl Chloride	ND	U	0.50	0.075	1	05/17/21 12:54	
o-Xylene	ND	U	0.50	0.074	1	05/17/21 12:54	
m,p-Xylenes	ND	U	0.50	0.11	1	05/17/21 12:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	05/17/21 12:54	
Dibromofluoromethane	95	73 - 122	05/17/21 12:54	
Toluene-d8	100	65 - 144	05/17/21 12:54	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	**17**	**J**	20	3.3	1	05/17/21 13:20	
Benzene	**0.12**	**J**	0.50	0.062	1	05/17/21 13:20	
Bromobenzene	ND	U	2.0	0.12	1	05/17/21 13:20	
Bromochloromethane	ND	U	0.50	0.16	1	05/17/21 13:20	
Bromodichloromethane	ND	U	0.50	0.091	1	05/17/21 13:20	
Bromoform	ND	U	0.50	0.16	1	05/17/21 13:20	
Bromomethane	ND	U	0.50	0.16	1	05/17/21 13:20	
2-Butanone (MEK)	**5.9**	**J**	20	1.9	1	05/17/21 13:20	
n-Butylbenzene	ND	U	4.0	0.054	1	05/17/21 13:20	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/17/21 13:20	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/17/21 13:20	
Carbon Disulfide	**0.070**	**J**	0.50	0.069	1	05/17/21 13:20	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/17/21 13:20	
Chlorobenzene	ND	U	0.50	0.11	1	05/17/21 13:20	
Chloroethane	ND	U	0.50	0.16	1	05/17/21 13:20	
Chloroform	ND	U	0.50	0.072	1	05/17/21 13:20	
Chloromethane	ND	U	0.50	0.068	1	05/17/21 13:20	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/17/21 13:20	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/17/21 13:20	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/17/21 13:20	
Dibromochloromethane	ND	U	0.50	0.14	1	05/17/21 13:20	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/17/21 13:20	
Dibromomethane	ND	U	0.50	0.15	1	05/17/21 13:20	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 13:20	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/17/21 13:20	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 13:20	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/17/21 13:20	*
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/17/21 13:20	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/17/21 13:20	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/17/21 13:20	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/17/21 13:20	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/17/21 13:20	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/17/21 13:20	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/17/21 13:20	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/17/21 13:20	
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/17/21 13:20	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/17/21 13:20	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/17/21 13:20	
Ethylbenzene	**0.070**	**J**	0.50	0.050	1	05/17/21 13:20	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/17/21 13:20	
2-Hexanone	ND	U	20	2.7	1	05/17/21 13:20	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND	U	2.0	0.051	1	05/17/21 13:20	
4-Isopropyltoluene	ND	U	2.0	0.060	1	05/17/21 13:20	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	05/17/21 13:20	
Methylene Chloride	ND	U	2.0	0.10	1	05/17/21 13:20	
Naphthalene	ND	U	2.0	0.088	1	05/17/21 13:20	*
n-Propylbenzene	ND	U	2.0	0.054	1	05/17/21 13:20	
Styrene	ND	U	0.50	0.089	1	05/17/21 13:20	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	05/17/21 13:20	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	05/17/21 13:20	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	05/17/21 13:20	
Toluene	**0.10**	**J**	0.50	0.054	1	05/17/21 13:20	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	05/17/21 13:20	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	05/17/21 13:20	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	05/17/21 13:20	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	05/17/21 13:20	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	05/17/21 13:20	
Trichlorofluoromethane (CFC 11)	ND	U	0.50	0.12	1	05/17/21 13:20	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	05/17/21 13:20	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	05/17/21 13:20	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	05/17/21 13:20	
Vinyl Chloride	ND	U	0.50	0.075	1	05/17/21 13:20	
o-Xylene	**0.090**	**J**	0.50	0.074	1	05/17/21 13:20	
m,p-Xylenes	**0.16**	**J**	0.50	0.11	1	05/17/21 13:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	68 - 117	05/17/21 13:20	
Dibromofluoromethane	93	73 - 122	05/17/21 13:20	
Toluene-d8	101	65 - 144	05/17/21 13:20	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	TB1-050621	**Units:**	ug/L
Lab Code:	K2105233-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND	U	20	3.3	1	05/19/21 15:31	
Benzene	ND	U	0.50	0.062	1	05/19/21 15:31	
Bromobenzene	ND	U	2.0	0.12	1	05/19/21 15:31	
Bromochloromethane	ND	U	0.50	0.16	1	05/19/21 15:31	
Bromodichloromethane	ND	U	0.50	0.091	1	05/19/21 15:31	
Bromoform	ND	U	0.50	0.16	1	05/19/21 15:31	
Bromomethane	ND	U	0.50	0.16	1	05/19/21 15:31	
2-Butanone (MEK)	ND	U	20	1.9	1	05/19/21 15:31	
n-Butylbenzene	ND	U	4.0	0.054	1	05/19/21 15:31	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/19/21 15:31	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/19/21 15:31	
Carbon Disulfide	**0.070**	**J**	0.50	0.069	1	05/19/21 15:31	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/19/21 15:31	
Chlorobenzene	ND	U	0.50	0.11	1	05/19/21 15:31	
Chloroethane	ND	U	0.50	0.16	1	05/19/21 15:31	
Chloroform	ND	U	0.50	0.072	1	05/19/21 15:31	
Chloromethane	ND	U	0.50	0.068	1	05/19/21 15:31	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/19/21 15:31	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/19/21 15:31	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/19/21 15:31	*
Dibromochloromethane	ND	U	0.50	0.14	1	05/19/21 15:31	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/19/21 15:31	
Dibromomethane	ND	U	0.50	0.15	1	05/19/21 15:31	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/19/21 15:31	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/19/21 15:31	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/19/21 15:31	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/19/21 15:31	
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/19/21 15:31	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/19/21 15:31	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/19/21 15:31	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/19/21 15:31	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/19/21 15:31	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/19/21 15:31	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/19/21 15:31	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/19/21 15:31	*
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/19/21 15:31	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/19/21 15:31	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/19/21 15:31	
Ethylbenzene	ND	U	0.50	0.050	1	05/19/21 15:31	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/19/21 15:31	
2-Hexanone	ND	U	20	2.7	1	05/19/21 15:31	

ALS Group USA, Corp.
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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	TB1-050621	**Units:**	ug/L
Lab Code:	K2105233-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	05/19/21 15:31	
4-Isopropyltoluene	ND U	2.0	0.060	1	05/19/21 15:31	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	05/19/21 15:31	
Methylene Chloride	**0.81 J**	2.0	0.10	1	05/19/21 15:31	
Naphthalene	ND U	2.0	0.088	1	05/19/21 15:31	*
n-Propylbenzene	ND U	2.0	0.054	1	05/19/21 15:31	
Styrene	ND U	0.50	0.089	1	05/19/21 15:31	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	05/19/21 15:31	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	05/19/21 15:31	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	05/19/21 15:31	
Toluene	ND U	0.50	0.054	1	05/19/21 15:31	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	05/19/21 15:31	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	05/19/21 15:31	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	05/19/21 15:31	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	05/19/21 15:31	
Trichloroethene (TCE)	ND U	0.50	0.10	1	05/19/21 15:31	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	05/19/21 15:31	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	05/19/21 15:31	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	05/19/21 15:31	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	05/19/21 15:31	
Vinyl Chloride	ND U	0.50	0.075	1	05/19/21 15:31	
o-Xylene	ND U	0.50	0.074	1	05/19/21 15:31	
m,p-Xylenes	ND U	0.50	0.11	1	05/19/21 15:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	05/19/21 15:31	
Dibromofluoromethane	95	73 - 122	05/19/21 15:31	
Toluene-d8	99	65 - 144	05/19/21 15:31	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2109125-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND	U	20	3.3	1	05/17/21 12:00	
Benzene	ND	U	0.50	0.062	1	05/17/21 12:00	
Bromobenzene	ND	U	2.0	0.12	1	05/17/21 12:00	
Bromochloromethane	ND	U	0.50	0.16	1	05/17/21 12:00	
Bromodichloromethane	ND	U	0.50	0.091	1	05/17/21 12:00	
Bromoform	ND	U	0.50	0.16	1	05/17/21 12:00	
Bromomethane	ND	U	0.50	0.16	1	05/17/21 12:00	
2-Butanone (MEK)	ND	U	20	1.9	1	05/17/21 12:00	
n-Butylbenzene	ND	U	4.0	0.054	1	05/17/21 12:00	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/17/21 12:00	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/17/21 12:00	
Carbon Disulfide	**0.070**	**J**	0.50	0.069	1	05/17/21 12:00	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/17/21 12:00	
Chlorobenzene	ND	U	0.50	0.11	1	05/17/21 12:00	
Chloroethane	ND	U	0.50	0.16	1	05/17/21 12:00	
Chloroform	ND	U	0.50	0.072	1	05/17/21 12:00	
Chloromethane	ND	U	0.50	0.068	1	05/17/21 12:00	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/17/21 12:00	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/17/21 12:00	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/17/21 12:00	
Dibromochloromethane	ND	U	0.50	0.14	1	05/17/21 12:00	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/17/21 12:00	
Dibromomethane	ND	U	0.50	0.15	1	05/17/21 12:00	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:00	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/17/21 12:00	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/17/21 12:00	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/17/21 12:00	
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/17/21 12:00	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/17/21 12:00	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/17/21 12:00	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/17/21 12:00	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/17/21 12:00	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/17/21 12:00	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/17/21 12:00	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/17/21 12:00	
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/17/21 12:00	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/17/21 12:00	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/17/21 12:00	
Ethylbenzene	ND	U	0.50	0.050	1	05/17/21 12:00	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/17/21 12:00	
2-Hexanone	ND	U	20	2.7	1	05/17/21 12:00	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2109125-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND	U	2.0	0.051	1	05/17/21 12:00	
4-Isopropyltoluene	ND	U	2.0	0.060	1	05/17/21 12:00	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	05/17/21 12:00	
Methylene Chloride	ND	U	2.0	0.10	1	05/17/21 12:00	
Naphthalene	**0.17**	**J**	2.0	0.088	1	05/17/21 12:00	
n-Propylbenzene	ND	U	2.0	0.054	1	05/17/21 12:00	
Styrene	ND	U	0.50	0.089	1	05/17/21 12:00	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	05/17/21 12:00	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	05/17/21 12:00	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	05/17/21 12:00	
Toluene	ND	U	0.50	0.054	1	05/17/21 12:00	
1,2,3-Trichlorobenzene	**0.17**	**J**	2.0	0.11	1	05/17/21 12:00	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	05/17/21 12:00	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	05/17/21 12:00	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	05/17/21 12:00	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	05/17/21 12:00	
Trichlorofluoromethane (CFC 11)	ND	U	0.50	0.12	1	05/17/21 12:00	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	05/17/21 12:00	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	05/17/21 12:00	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	05/17/21 12:00	
Vinyl Chloride	ND	U	0.50	0.075	1	05/17/21 12:00	
o-Xylene	ND	U	0.50	0.074	1	05/17/21 12:00	
m,p-Xylenes	ND	U	0.50	0.11	1	05/17/21 12:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	68 - 117	05/17/21 12:00	
Dibromofluoromethane	96	73 - 122	05/17/21 12:00	
Toluene-d8	104	65 - 144	05/17/21 12:00	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2109362-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND	U	20	3.3	1	05/19/21 13:18	
Benzene	ND	U	0.50	0.062	1	05/19/21 13:18	
Bromobenzene	ND	U	2.0	0.12	1	05/19/21 13:18	
Bromochloromethane	ND	U	0.50	0.16	1	05/19/21 13:18	
Bromodichloromethane	ND	U	0.50	0.091	1	05/19/21 13:18	
Bromoform	ND	U	0.50	0.16	1	05/19/21 13:18	
Bromomethane	ND	U	0.50	0.16	1	05/19/21 13:18	
2-Butanone (MEK)	ND	U	20	1.9	1	05/19/21 13:18	
n-Butylbenzene	ND	U	4.0	0.054	1	05/19/21 13:18	
sec-Butylbenzene	ND	U	2.0	0.062	1	05/19/21 13:18	
tert-Butylbenzene	ND	U	2.0	0.059	1	05/19/21 13:18	
Carbon Disulfide	**0.090**	**J**	0.50	0.069	1	05/19/21 13:18	
Carbon Tetrachloride	ND	U	0.50	0.096	1	05/19/21 13:18	
Chlorobenzene	ND	U	0.50	0.11	1	05/19/21 13:18	
Chloroethane	ND	U	0.50	0.16	1	05/19/21 13:18	
Chloroform	ND	U	0.50	0.072	1	05/19/21 13:18	
Chloromethane	ND	U	0.50	0.068	1	05/19/21 13:18	
2-Chlorotoluene	ND	U	2.0	0.10	1	05/19/21 13:18	
4-Chlorotoluene	ND	U	2.0	0.13	1	05/19/21 13:18	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.22	1	05/19/21 13:18	
Dibromochloromethane	ND	U	0.50	0.14	1	05/19/21 13:18	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	05/19/21 13:18	
Dibromomethane	ND	U	0.50	0.15	1	05/19/21 13:18	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	05/19/21 13:18	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	05/19/21 13:18	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	05/19/21 13:18	
Dichlorodifluoromethane	ND	U	0.50	0.13	1	05/19/21 13:18	
1,1-Dichloroethane	ND	U	0.50	0.077	1	05/19/21 13:18	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	05/19/21 13:18	
1,1-Dichloroethene	ND	U	0.50	0.080	1	05/19/21 13:18	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	05/19/21 13:18	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	05/19/21 13:18	
1,2-Dichloropropane	ND	U	0.50	0.095	1	05/19/21 13:18	
1,3-Dichloropropane	ND	U	0.50	0.14	1	05/19/21 13:18	
2,2-Dichloropropane	ND	U	0.50	0.065	1	05/19/21 13:18	
1,1-Dichloropropene	ND	U	0.50	0.089	1	05/19/21 13:18	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	05/19/21 13:18	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	05/19/21 13:18	
Ethylbenzene	ND	U	0.50	0.050	1	05/19/21 13:18	
Hexachlorobutadiene	ND	U	2.0	0.11	1	05/19/21 13:18	
2-Hexanone	ND	U	20	2.7	1	05/19/21 13:18	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2109362-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND	U	2.0	0.051	1	05/19/21 13:18	
4-Isopropyltoluene	ND	U	2.0	0.060	1	05/19/21 13:18	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	05/19/21 13:18	
Methylene Chloride	ND	U	2.0	0.10	1	05/19/21 13:18	
Naphthalene	**0.16**	**J**	2.0	0.088	1	05/19/21 13:18	
n-Propylbenzene	ND	U	2.0	0.054	1	05/19/21 13:18	
Styrene	ND	U	0.50	0.089	1	05/19/21 13:18	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	05/19/21 13:18	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	05/19/21 13:18	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	05/19/21 13:18	
Toluene	ND	U	0.50	0.054	1	05/19/21 13:18	
1,2,3-Trichlorobenzene	**0.18**	**J**	2.0	0.11	1	05/19/21 13:18	
1,2,4-Trichlorobenzene	**0.11**	**J**	2.0	0.096	1	05/19/21 13:18	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	05/19/21 13:18	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	05/19/21 13:18	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	05/19/21 13:18	
Trichlorofluoromethane (CFC 11)	ND	U	0.50	0.12	1	05/19/21 13:18	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	05/19/21 13:18	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	05/19/21 13:18	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	05/19/21 13:18	
Vinyl Chloride	ND	U	0.50	0.075	1	05/19/21 13:18	
o-Xylene	ND	U	0.50	0.074	1	05/19/21 13:18	
m,p-Xylenes	ND	U	0.50	0.11	1	05/19/21 13:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	68 - 117	05/19/21 13:18	
Dibromofluoromethane	98	73 - 122	05/19/21 13:18	
Toluene-d8	102	65 - 144	05/19/21 13:18	

Client: Anchor QEA, LLC **Service Request:** K2105233

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene 68-117	Dibromofluoromethane 73-122	Toluene-d8 65-144
SB1-GW-050621	K2105233-001	90	97	100
SB2-GW-050621	K2105233-002	90	95	100
SB3-GW-050621	K2105233-003	93	93	101
TB1-050621	K2105233-004	90	95	99
Method Blank	KQ2109125-04	90	96	104
Method Blank	KQ2109362-05	89	98	102
Lab Control Sample	KQ2109125-02	97	96	100
Duplicate Lab Control Sample	KQ2109125-03	98	96	104
Lab Control Sample	KQ2109362-03	98	99	104
Duplicate Lab Control Sample	KQ2109362-04	94	96	104
SB1-GW-050621	KQ2109125-06	95	98	102
SB1-GW-050621	KQ2109125-07	97	96	104

Client: Anchor QEA, LLC **Service Request:**K2105233
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/17/21 09:48

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: J:\MS13\DATA\051721\0517F002.D\ **Lab Code:**KQ2109125-01
Instrument ID: K-MS-13 **Analysis Lot:**723724
Analysis Method: 8260C **Signal ID:**1

		Chlorobenzene-d5		1,4-Dichlorobenzene-d4		Fluorobenzene	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	155,290	9.36	123,556	11.96	402,368	5.32
	Upper Limit ==>	310,580	9.86	247,112	12.46	804,736	5.82
	Lower Limit ==>	77,645	8.86	61,778	11.46	201,184	4.82
Associated Analyses							
Lab Control Sample	KQ2109125-02	157812	9.36	126809	11.96	407448	5.32
Duplicate Lab Control Sample	KQ2109125-03	157626	9.36	124253	11.96	405236	5.32
Method Blank	KQ2109125-04	154563	9.36	117964	11.96	368151	5.32
SB1-GW-050621	K2105233-001	154276	9.36	116416	11.96	389621	5.32
SB2-GW-050621	K2105233-002	161370	9.36	122675	11.96	393170	5.32
SB3-GW-050621	K2105233-003	152428	9.36	116552	11.96	381753	5.32
SB1-GW-050621MS	KQ2109125-06	161212	9.36	126467	11.96	408945	5.32
SB1-GW-050621DMS	KQ2109125-07	161131	9.36	125294	11.96	403521	5.32

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QA/QC Report

Client: Anchor QEA, LLC **Service Request:**K2105233
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/19/21 10:39

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: J:\MS13\DATA\051921\0519F004.D\ **Lab Code:**KQ2109362-02
Instrument ID: K-MS-13 **Analysis Lot:**724120
Analysis Method: 8260C **Signal ID:**1

		Chlorobenzene-d5		1,4-Dichlorobenzene-d4		Fluorobenzene	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	155,332	9.36	117,808	11.96	391,420	5.32
	Upper Limit ==>	310,664	9.86	235,616	12.46	782,840	5.82
	Lower Limit ==>	77,666	8.86	58,904	11.46	195,710	4.82
Associated Analyses							
Lab Control Sample	KQ2109362-03	157756	9.36	129165	11.96	393074	5.32
Duplicate Lab Control Sample	KQ2109362-04	160371	9.36	126196	11.95	398799	5.32
Method Blank	KQ2109362-05	152853	9.36	116268	11.96	381428	5.32
TB1-050621	K2105233-004	152415	9.36	111138	11.96	372703	5.32

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	05/17/21
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	None		

		Matrix Spike			Duplicate Matrix Spike					
		KQ2109125-06			KQ2109125-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Acetone	13 J	111	100	98	114	100	101	68-134	3	30
Benzene	0.14 J	10.5	10.0	103	9.85	10.0	97	63-144	6	30
Bromobenzene	ND U	9.37	10.0	94	9.17	10.0	92	72-122	2	30
Bromochloromethane	ND U	10.5	10.0	105	9.61	10.0	96	73-135	9	30
Bromodichloromethane	ND U	10.3	10.0	103	10.0	10.0	100	61-134	3	30
Bromoform	ND U	9.94	10.0	99	10.0	10.0	100	54-140	<1	30
Bromomethane	ND U	8.94	10.0	89	8.33	10.0	83	36-127	7	30
2-Butanone (MEK)	3.0 J	108	100	105	104	100	101	65-147	4	30
n-Butylbenzene	ND U	8.92	10.0	89	8.66	10.0	87	52-144	3	30
sec-Butylbenzene	ND U	9.20	10.0	92	8.86	10.0	89	56-142	4	30
tert-Butylbenzene	ND U	9.29	10.0	93	8.77	10.0	88	59-139	6	30
Carbon Disulfide	0.090 J	10.3	10.0	102	9.08	10.0	90	52-156	12	30
Carbon Tetrachloride	ND U	10.8	10.0	108	9.84	10.0	98	53-161	9	30
Chlorobenzene	ND U	9.73	10.0	97	9.05	10.0	91	69-126	7	30
Chloroethane	ND U	10.9	10.0	109	10.2	10.0	102	56-147	7	30
Chloroform	ND U	9.91	10.0	99	9.58	10.0	96	64-133	3	30
Chloromethane	ND U	11.3	10.0	113	10.7	10.0	107	49-127	6	30
2-Chlorotoluene	ND U	9.17	10.0	92	8.77	10.0	88	55-139	4	30
4-Chlorotoluene	ND U	9.28	10.0	93	8.93	10.0	89	57-138	4	30
1,2-Dibromo-3-chloropropane	ND U	8.36	10.0	84	8.49	10.0	85	59-133	2	30
Dibromochloromethane	ND U	10.8	10.0	108	10.6	10.0	106	68-125	2	30
1,2-Dibromoethane (EDB)	ND U	9.01	10.0	90	9.15	10.0	92	73-122	2	30
Dibromomethane	ND U	9.58	10.0	96	9.27	10.0	93	68-132	3	30
1,2-Dichlorobenzene	ND U	8.95	10.0	90	9.02	10.0	90	72-119	<1	30
1,3-Dichlorobenzene	ND U	8.96	10.0	90	8.74	10.0	87	70-121	2	30
1,4-Dichlorobenzene	ND U	9.05	10.0	91	8.68	10.0	87	72-121	4	30
Dichlorodifluoromethane	ND U	13.2	10.0	132	12.0	10.0	120	29-133	9	30
1,1-Dichloroethane	ND U	10.1	10.0	101	9.70	10.0	97	69-141	4	30
1,2-Dichloroethane (EDC)	ND U	9.50	10.0	95	9.24	10.0	92	56-141	3	30
1,1-Dichloroethene	ND U	9.69	10.0	97	8.72	10.0	87	59-171	11	30
cis-1,2-Dichloroethene	ND U	10.3	10.0	103	9.65	10.0	97	61-139	6	30
trans-1,2-Dichloroethene	ND U	10.8	10.0	108	10.1	10.0	101	65-143	7	30
1,2-Dichloropropane	ND U	10.1	10.0	101	9.66	10.0	97	63-131	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21
Sample Matrix:	Water	**Date Received:**	05/11/21
		Date Analyzed:	05/17/21
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	None		

		Matrix Spike KQ2109125-06			Duplicate Matrix Spike KQ2109125-07					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,3-Dichloropropane	ND U	9.43	10.0	94	9.24	10.0	92	74-121	2	30
2,2-Dichloropropane	ND U	7.56	10.0	76	6.98	10.0	70	39-161	8	30
1,1-Dichloropropene	ND U	10.6	10.0	106	9.69	10.0	97	61-148	9	30
cis-1,3-Dichloropropene	ND U	9.39	10.0	94	9.46	10.0	95	66-134	<1	30
trans-1,3-Dichloropropene	ND U	7.72	10.0	77	7.76	10.0	78	56-127	<1	30
Ethylbenzene	ND U	9.16	10.0	92	8.75	10.0	88	66-136	5	30
Hexachlorobutadiene	ND U	8.90	10.0	89	9.16	10.0	92	60-132	3	30
2-Hexanone	ND U	84.2	100	84	87.3	100	87	53-132	4	30
Isopropylbenzene	ND U	9.50	10.0	95	8.91	10.0	89	58-144	6	30
4-Isopropyltoluene	0.38 J	9.64	10.0	93	9.15	10.0	88	57-141	5	30
4-Methyl-2-pentanone (MIBK)	ND U	102	100	102	97.9	100	98	64-139	4	30
Methylene Chloride	ND U	10.2	10.0	102	9.93	10.0	99	70-133	3	30
Naphthalene	ND U	7.02	10.0	70	7.71	10.0	77	52-147	9	30
n-Propylbenzene	ND U	9.70	10.0	97	9.11	10.0	91	55-144	6	30
Styrene	ND U	8.89	10.0	89	8.63	10.0	86	66-131	3	30
1,1,1,2-Tetrachloroethane	ND U	9.63	10.0	96	9.38	10.0	94	67-127	3	30
1,1,2,2-Tetrachloroethane	ND U	9.53	10.0	95	9.68	10.0	97	72-129	2	30
Tetrachloroethene (PCE)	ND U	10.0	10.0	100	8.89	10.0	89	61-131	12	30
Toluene	0.20 J	10.8	10.0	106	10.1	10.0	99	71-136	7	30
1,2,3-Trichlorobenzene	ND U	7.44	10.0	74	8.55	10.0	86	57-137	14	30
1,2,4-Trichlorobenzene	ND U	7.98	10.0	80	8.18	10.0	82	57-133	2	30
1,1,2-Trichloroethane	ND U	9.89	10.0	99	9.27	10.0	93	74-124	6	30
1,1,1-Trichloroethane (TCA)	ND U	9.76	10.0	98	9.07	10.0	91	57-151	7	30
Trichloroethene (TCE)	ND U	10.3	10.0	103	9.53	10.0	95	53-139	7	30
Trichlorofluoromethane (CFC 11)	ND U	10.1	10.0	101	9.13	10.0	91	45-124	10	30
1,2,3-Trichloropropane	ND U	9.27	10.0	93	9.33	10.0	93	71-127	<1	30
1,2,4-Trimethylbenzene	ND U	9.30	10.0	93	8.82	10.0	88	61-132	5	30
1,3,5-Trimethylbenzene	ND U	9.06	10.0	91	8.74	10.0	87	60-136	4	30
Vinyl Chloride	ND U	11.2	10.0	112	10.4	10.0	104	49-136	7	30
o-Xylene	ND U	9.31	10.0	93	8.76	10.0	88	67-127	6	30
m,p-Xylenes	ND U	18.6	20.0	93	17.4	20.0	87	67-135	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/17/21
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	723724

	Lab Control Sample KQ2109125-02			Duplicate Lab Control Sample KQ2109125-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	10.2	10.0	102	10.1	10.0	101	66-124	1	30
1,1,1-Trichloroethane (TCA)	9.86	10.0	99	9.25	10.0	93	59-136	6	30
1,1,2,2-Tetrachloroethane	9.89	10.0	99	9.99	10.0	100	70-127	1	30
1,1,2-Trichloroethane	10.0	10.0	100	9.81	10.0	98	74-118	2	30
1,1-Dichloroethane	10.5	10.0	105	9.85	10.0	99	68-132	6	30
1,1-Dichloroethene	8.99	10.0	90	8.83	10.0	88	66-129	2	30
1,1-Dichloropropene	10.3	10.0	103	9.79	10.0	98	59-134	5	30
1,2,3-Trichlorobenzene	9.53	10.0	95	9.60	10.0	96	68-120	<1	30
1,2,3-Trichloropropane	9.68	10.0	97	10.7	10.0	107	69-123	10	30
1,2,4-Trichlorobenzene	9.28	10.0	93	9.60	10.0	96	58-126	3	30
1,2,4-Trimethylbenzene	9.54	10.0	95	9.61	10.0	96	63-122	<1	30
1,2-Dibromo-3-chloropropane	8.43	10.0	84	9.14	10.0	91	55-132	8	30
1,2-Dibromoethane (EDB)	9.62	10.0	96	9.36	10.0	94	74-118	3	30
1,2-Dichlorobenzene	9.77	10.0	98	9.58	10.0	96	72-115	2	30
1,2-Dichloroethane (EDC)	9.79	10.0	98	9.69	10.0	97	56-142	1	30
1,2-Dichloropropane	10.4	10.0	104	10.0	10.0	100	67-126	4	30
1,3,5-Trimethylbenzene	9.48	10.0	95	9.49	10.0	95	62-126	<1	30
1,3-Dichlorobenzene	9.47	10.0	95	9.56	10.0	96	70-116	<1	30
1,3-Dichloropropane	9.81	10.0	98	9.95	10.0	100	75-116	1	30
1,4-Dichlorobenzene	9.39	10.0	94	9.49	10.0	95	73-115	1	30
2,2-Dichloropropane	8.12	10.0	81	7.60	10.0	76	37-145	7	30
2-Butanone (MEK)	112	100	112	103	100	103	71-149	8	30
2-Chlorotoluene	9.45	10.0	95	9.32	10.0	93	55-131	1	30
2-Hexanone	93.7	100	94	90.5	100	91	59-131	3	30
4-Chlorotoluene	9.56	10.0	96	9.63	10.0	96	66-121	<1	30
4-Isopropyltoluene	9.27	10.0	93	9.34	10.0	93	61-128	<1	30
4-Methyl-2-pentanone (MIBK)	106	100	106	105	100	105	64-134	1	30
Acetone	110	100	110	101	100	101	68-135	8	30
Benzene	10.4	10.0	104	9.95	10.0	100	69-124	4	30
Bromobenzene	9.50	10.0	95	9.88	10.0	99	72-116	4	30
Bromochloromethane	10.6	10.0	106	10.1	10.0	101	75-131	5	30
Bromodichloromethane	10.9	10.0	109	10.3	10.0	103	63-129	5	30
Bromoform	10.5	10.0	105	10.8	10.0	108	52-144	2	30
Bromomethane	8.90	10.0	89	8.61	10.0	86	35-113	3	30
Carbon Disulfide	9.89	10.0	99	9.26	10.0	93	46-144	7	30
Carbon Tetrachloride	10.4	10.0	104	10.2	10.0	102	55-140	3	30
Chlorobenzene	10.1	10.0	101	9.94	10.0	99	72-116	1	30
Chloroethane	10.6	10.0	106	10.2	10.0	102	58-134	4	30
Chloroform	10.3	10.0	103	9.88	10.0	99	70-129	4	30
Chloromethane	11.1	10.0	111	11.0	10.0	110	34-130	<1	30
cis-1,2-Dichloroethene	10.6	10.0	106	9.86	10.0	99	71-118	7	30

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/17/21
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	723724

	Lab Control Sample KQ2109125-02			Duplicate Lab Control Sample KQ2109125-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
cis-1,3-Dichloropropene	10.3	10.0	103	10.1	10.0	101	62-132	2	30
Dibromochloromethane	11.9	10.0	119	11.6	10.0	116	67-126	3	30
Dibromomethane	10.1	10.0	101	9.55	10.0	96	69-128	6	30
Dichlorodifluoromethane	12.0	10.0	120	11.7	10.0	117	32-124	2	30
Ethylbenzene	9.56	10.0	96	9.38	10.0	94	67-121	2	30
Hexachlorobutadiene	10.1	10.0	101	10.0	10.0	100	57-119	<1	30
Isopropylbenzene	9.61	10.0	96	9.45	10.0	95	67-129	2	30
m,p-Xylenes	19.3	20.0	97	18.9	20.0	95	69-121	2	30
Methylene Chloride	10.7	10.0	107	10.3	10.0	103	71-122	4	30
Naphthalene	8.46	10.0	85	8.59	10.0	86	64-126	2	30
n-Butylbenzene	9.29	10.0	93	9.09	10.0	91	55-130	2	30
n-Propylbenzene	9.62	10.0	96	9.68	10.0	97	61-124	<1	30
o-Xylene	9.47	10.0	95	9.47	10.0	95	71-119	<1	30
sec-Butylbenzene	9.32	10.0	93	9.35	10.0	94	59-128	<1	30
Styrene	10.1	10.0	101	9.89	10.0	99	74-121	2	30
tert-Butylbenzene	9.17	10.0	92	9.21	10.0	92	61-127	<1	30
Tetrachloroethene (PCE)	9.96	10.0	100	9.50	10.0	95	62-126	5	30
Toluene	10.6	10.0	106	10.4	10.0	104	69-124	2	30
trans-1,2-Dichloroethene	11.0	10.0	110	10.1	10.0	101	67-125	9	30
trans-1,3-Dichloropropene	8.93	10.0	89	8.46	10.0	85	59-125	5	30
Trichloroethene (TCE)	10.2	10.0	102	9.98	10.0	100	67-128	2	30
Trichlorofluoromethane (CFC 11)	9.37	10.0	94	9.12	10.0	91	52-141	3	30
Vinyl Chloride	10.7	10.0	107	10.4	10.0	104	55-123	3	30

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/19/21
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	724120

	Lab Control Sample KQ2109362-03			Duplicate Lab Control Sample KQ2109362-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	9.85	10.0	99	9.67	10.0	97	66-124	2	30
1,1,1-Trichloroethane (TCA)	9.66	10.0	97	9.62	10.0	96	59-136	<1	30
1,1,2,2-Tetrachloroethane	9.03	10.0	90	9.11	10.0	91	70-127	<1	30
1,1,2-Trichloroethane	9.29	10.0	93	9.42	10.0	94	74-118	1	30
1,1-Dichloroethane	10.3	10.0	103	10.2	10.0	102	68-132	<1	30
1,1-Dichloroethene	9.23	10.0	92	9.23	10.0	92	66-129	<1	30
1,1-Dichloropropene	10.2	10.0	102	10.2	10.0	102	59-134	<1	30
1,2,3-Trichlorobenzene	8.25	10.0	83	8.94	10.0	89	68-120	8	30
1,2,3-Trichloropropane	8.94	10.0	89	9.44	10.0	94	69-123	5	30
1,2,4-Trichlorobenzene	8.20	10.0	82	8.61	10.0	86	58-126	5	30
1,2,4-Trimethylbenzene	8.83	10.0	88	9.32	10.0	93	63-122	5	30
1,2-Dibromo-3-chloropropane	7.83	10.0	78	8.20	10.0	82	55-132	5	30
1,2-Dibromoethane (EDB)	9.02	10.0	90	8.97	10.0	90	74-118	<1	30
1,2-Dichlorobenzene	9.08	10.0	91	9.35	10.0	94	72-115	3	30
1,2-Dichloroethane (EDC)	9.34	10.0	93	9.55	10.0	96	56-142	2	30
1,2-Dichloropropane	10.3	10.0	103	10.2	10.0	102	67-126	1	30
1,3,5-Trimethylbenzene	8.86	10.0	89	8.98	10.0	90	62-126	1	30
1,3-Dichlorobenzene	8.68	10.0	87	8.99	10.0	90	70-116	4	30
1,3-Dichloropropane	9.39	10.0	94	9.25	10.0	93	75-116	2	30
1,4-Dichlorobenzene	8.73	10.0	87	8.97	10.0	90	73-115	3	30
2,2-Dichloropropane	7.56	10.0	76	7.67	10.0	77	37-145	1	30
2-Butanone (MEK)	103	100	103	100	100	100	71-149	3	30
2-Chlorotoluene	8.77	10.0	88	9.09	10.0	91	55-131	4	30
2-Hexanone	86.9	100	87	84.2	100	84	59-131	3	30
4-Chlorotoluene	8.93	10.0	89	9.28	10.0	93	66-121	4	30
4-Isopropyltoluene	8.79	10.0	88	9.05	10.0	91	61-128	3	30
4-Methyl-2-pentanone (MIBK)	101	100	101	96.8	100	97	64-134	4	30
Acetone	106	100	106	99.6	100	100	68-135	6	30
Benzene	10.2	10.0	102	10.0	10.0	100	69-124	1	30
Bromobenzene	8.58	10.0	86	9.48	10.0	95	72-116	10	30
Bromochloromethane	10.0	10.0	100	10.3	10.0	103	75-131	3	30
Bromodichloromethane	10.3	10.0	103	10.5	10.0	105	63-129	1	30
Bromoform	9.60	10.0	96	9.40	10.0	94	52-144	2	30
Bromomethane	8.76	10.0	88	8.52	10.0	85	35-113	3	30
Carbon Disulfide	9.51	10.0	95	9.56	10.0	96	46-144	<1	30
Carbon Tetrachloride	10.4	10.0	104	10.6	10.0	106	55-140	2	30
Chlorobenzene	9.41	10.0	94	9.37	10.0	94	72-116	<1	30
Chloroethane	10.6	10.0	106	10.5	10.0	105	58-134	<1	30
Chloroform	9.74	10.0	97	9.92	10.0	99	70-129	2	30
Chloromethane	10.6	10.0	106	10.7	10.0	107	34-130	<1	30
cis-1,2-Dichloroethene	10.4	10.0	104	10.1	10.0	101	71-118	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/19/21
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	724120

	Lab Control Sample KQ2109362-03			Duplicate Lab Control Sample KQ2109362-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
cis-1,3-Dichloropropene	9.63	10.0	96	9.59	10.0	96	62-132	<1	30
Dibromochloromethane	10.8	10.0	108	10.4	10.0	104	67-126	4	30
Dibromomethane	9.54	10.0	95	9.81	10.0	98	69-128	3	30
Dichlorodifluoromethane	11.5	10.0	115	12.0	10.0	120	32-124	4	30
Ethylbenzene	9.24	10.0	92	9.07	10.0	91	67-121	2	30
Hexachlorobutadiene	9.20	10.0	92	9.72	10.0	97	57-119	5	30
Isopropylbenzene	9.19	10.0	92	9.18	10.0	92	67-129	<1	30
m,p-Xylenes	18.3	20.0	91	18.1	20.0	90	69-121	1	30
Methylene Chloride	10.4	10.0	104	10.3	10.0	103	71-122	2	30
Naphthalene	7.52	10.0	75	7.99	10.0	80	64-126	6	30
n-Butylbenzene	8.69	10.0	87	8.87	10.0	89	55-130	2	30
n-Propylbenzene	9.10	10.0	91	9.33	10.0	93	61-124	2	30
o-Xylene	9.01	10.0	90	8.89	10.0	89	71-119	1	30
sec-Butylbenzene	8.81	10.0	88	9.06	10.0	91	59-128	3	30
Styrene	9.39	10.0	94	9.26	10.0	93	74-121	1	30
tert-Butylbenzene	8.67	10.0	87	8.92	10.0	89	61-127	3	30
Tetrachloroethene (PCE)	9.44	10.0	94	9.42	10.0	94	62-126	<1	30
Toluene	10.5	10.0	105	10.3	10.0	103	69-124	2	30
trans-1,2-Dichloroethene	10.6	10.0	106	10.4	10.0	104	67-125	2	30
trans-1,3-Dichloropropene	7.65	10.0	77	7.65	10.0	77	59-125	<1	30
Trichloroethene (TCE)	9.98	10.0	100	10.3	10.0	103	67-128	3	30
Trichlorofluoromethane (CFC 11)	9.54	10.0	95	9.48	10.0	95	52-141	<1	30
Vinyl Chloride	10.4	10.0	104	10.5	10.0	105	55-123	<1	30

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 16:00
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB1-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-001	**Basis:**	NA

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**0.0043 J**	0.020	0.0013	1	05/13/21 16:57	5/12/21	
Acenaphthene	**0.0018 J**	0.020	0.0012	1	05/13/21 16:57	5/12/21	
Acenaphthylene	ND U	0.020	0.0011	1	05/13/21 16:57	5/12/21	
Anthracene	**0.0031 J**	0.020	0.00082	1	05/13/21 16:57	5/12/21	
Benz(a)anthracene	ND U	0.020	0.00097	1	05/13/21 16:57	5/12/21	
Benzo(a)pyrene	ND U	0.020	0.0011	1	05/13/21 16:57	5/12/21	
Benzo(b)fluoranthene	ND U	0.020	0.00083	1	05/13/21 16:57	5/12/21	
Benzo(g,h,i)perylene	ND U	0.020	0.00086	1	05/13/21 16:57	5/12/21	
Benzo(k)fluoranthene	ND U	0.020	0.00094	1	05/13/21 16:57	5/12/21	
Chrysene	ND U	0.020	0.00076	1	05/13/21 16:57	5/12/21	
Dibenz(a,h)anthracene	ND U	0.020	0.0013	1	05/13/21 16:57	5/12/21	
Dibenzofuran	**0.0027 J**	0.020	0.00096	1	05/13/21 16:57	5/12/21	
Fluoranthene	ND U	0.020	0.00082	1	05/13/21 16:57	5/12/21	
Fluorene	**0.0048 J**	0.020	0.0011	1	05/13/21 16:57	5/12/21	
Indeno(1,2,3-cd)pyrene	ND U	0.020	0.00089	1	05/13/21 16:57	5/12/21	
Naphthalene	**0.0081 J**	0.020	0.0014	1	05/13/21 16:57	5/12/21	
Phenanthrene	**0.0055 J**	0.020	0.0011	1	05/13/21 16:57	5/12/21	
Pyrene	**0.0020 J**	0.020	0.0010	1	05/13/21 16:57	5/12/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	82	42 - 133	05/13/21 16:57	
Fluorene-d10	100	42 - 131	05/13/21 16:57	
Terphenyl-d14	89	32 - 129	05/13/21 16:57	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 12:30
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB2-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-002	**Basis:**	NA

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3511

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**0.0087**	**J**	0.020	0.0013	1	05/13/21 17:23	5/12/21	
Acenaphthene	**0.0028**	**J**	0.020	0.0012	1	05/13/21 17:23	5/12/21	
Acenaphthylene	**0.0017**	**J**	0.020	0.0011	1	05/13/21 17:23	5/12/21	
Anthracene	ND	U	0.020	0.00082	1	05/13/21 17:23	5/12/21	
Benz(a)anthracene	ND	U	0.020	0.00097	1	05/13/21 17:23	5/12/21	
Benzo(a)pyrene	ND	U	0.020	0.0011	1	05/13/21 17:23	5/12/21	
Benzo(b)fluoranthene	ND	U	0.020	0.00083	1	05/13/21 17:23	5/12/21	
Benzo(g,h,i)perylene	ND	U	0.020	0.00086	1	05/13/21 17:23	5/12/21	
Benzo(k)fluoranthene	ND	U	0.020	0.00094	1	05/13/21 17:23	5/12/21	
Chrysene	ND	U	0.020	0.00076	1	05/13/21 17:23	5/12/21	
Dibenz(a,h)anthracene	ND	U	0.020	0.0013	1	05/13/21 17:23	5/12/21	
Dibenzofuran	**0.0028**	**J**	0.020	0.00096	1	05/13/21 17:23	5/12/21	
Fluoranthene	ND	U	0.020	0.00082	1	05/13/21 17:23	5/12/21	
Fluorene	**0.0052**	**J**	0.020	0.0011	1	05/13/21 17:23	5/12/21	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	0.00089	1	05/13/21 17:23	5/12/21	
Naphthalene	**0.0092**	**J**	0.020	0.0014	1	05/13/21 17:23	5/12/21	
Phenanthrene	**0.0081**	**J**	0.020	0.0011	1	05/13/21 17:23	5/12/21	
Pyrene	**0.0032**	**J**	0.020	0.0010	1	05/13/21 17:23	5/12/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	78	42 - 133	05/13/21 17:23	
Fluorene-d10	95	42 - 131	05/13/21 17:23	
Terphenyl-d14	58	32 - 129	05/13/21 17:23	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/06/21 14:45
Sample Matrix:	Water	**Date Received:**	05/11/21 12:30
Sample Name:	SB3-GW-050621	**Units:**	ug/L
Lab Code:	K2105233-003	**Basis:**	NA

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3511

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**0.012**	**J**	0.020	0.0013	1	05/13/21 17:48	5/12/21	
Acenaphthene	ND	U	0.020	0.0012	1	05/13/21 17:48	5/12/21	
Acenaphthylene	**0.0072**	**J**	0.020	0.0011	1	05/13/21 17:48	5/12/21	
Anthracene	ND	U	0.020	0.00082	1	05/13/21 17:48	5/12/21	
Benz(a)anthracene	ND	U	0.020	0.00097	1	05/13/21 17:48	5/12/21	
Benzo(a)pyrene	ND	U	0.020	0.0011	1	05/13/21 17:48	5/12/21	
Benzo(b)fluoranthene	ND	U	0.020	0.00083	1	05/13/21 17:48	5/12/21	
Benzo(g,h,i)perylene	ND	U	0.020	0.00086	1	05/13/21 17:48	5/12/21	
Benzo(k)fluoranthene	ND	U	0.020	0.00094	1	05/13/21 17:48	5/12/21	
Chrysene	ND	U	0.020	0.00076	1	05/13/21 17:48	5/12/21	
Dibenz(a,h)anthracene	ND	U	0.020	0.0013	1	05/13/21 17:48	5/12/21	
Dibenzofuran	**0.0065**	**J**	0.020	0.00096	1	05/13/21 17:48	5/12/21	
Fluoranthene	**0.0026**	**J**	0.020	0.00082	1	05/13/21 17:48	5/12/21	
Fluorene	**0.017**	**J**	0.020	0.0011	1	05/13/21 17:48	5/12/21	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	0.00089	1	05/13/21 17:48	5/12/21	
Naphthalene	**0.014**	**J**	0.020	0.0014	1	05/13/21 17:48	5/12/21	
Phenanthrene	**0.024**		0.020	0.0011	1	05/13/21 17:48	5/12/21	
Pyrene	**0.0048**	**J**	0.020	0.0010	1	05/13/21 17:48	5/12/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	84	42 - 133	05/13/21 17:48	
Fluorene-d10	94	42 - 131	05/13/21 17:48	
Terphenyl-d14	62	32 - 129	05/13/21 17:48	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ2108138-03	**Basis:**	NA

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3511

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND	U	0.020	0.0013	1	05/13/21 15:38	5/12/21	
Acenaphthene	ND	U	0.020	0.0012	1	05/13/21 15:38	5/12/21	
Acenaphthylene	ND	U	0.020	0.0011	1	05/13/21 15:38	5/12/21	
Anthracene	ND	U	0.020	0.00082	1	05/13/21 15:38	5/12/21	
Benz(a)anthracene	ND	U	0.020	0.00097	1	05/13/21 15:38	5/12/21	
Benzo(a)pyrene	ND	U	0.020	0.0011	1	05/13/21 15:38	5/12/21	
Benzo(b)fluoranthene	ND	U	0.020	0.00083	1	05/13/21 15:38	5/12/21	
Benzo(g,h,i)perylene	ND	U	0.020	0.00086	1	05/13/21 15:38	5/12/21	
Benzo(k)fluoranthene	ND	U	0.020	0.00094	1	05/13/21 15:38	5/12/21	
Chrysene	ND	U	0.020	0.00076	1	05/13/21 15:38	5/12/21	
Dibenz(a,h)anthracene	ND	U	0.020	0.0013	1	05/13/21 15:38	5/12/21	
Dibenzofuran	ND	U	0.020	0.00096	1	05/13/21 15:38	5/12/21	
Fluoranthene	ND	U	0.020	0.00082	1	05/13/21 15:38	5/12/21	
Fluorene	**0.0083**	**J**	0.020	0.0011	1	05/13/21 15:38	5/12/21	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	0.00089	1	05/13/21 15:38	5/12/21	
Naphthalene	ND	U	0.020	0.0014	1	05/13/21 15:38	5/12/21	
Phenanthrene	ND	U	0.020	0.0011	1	05/13/21 15:38	5/12/21	
Pyrene	ND	U	0.020	0.0010	1	05/13/21 15:38	5/12/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	88	42 - 133	05/13/21 15:38	
Fluorene-d10	99	42 - 131	05/13/21 15:38	
Terphenyl-d14	109	32 - 129	05/13/21 15:38	

Client: Anchor QEA, LLC **Service Request:** K2105233

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D

Extraction Method: EPA 3511

Sample Name	Lab Code	Fluoranthene-d10 42-133	Fluorene-d10 42-131	Terphenyl-d14 32-129
SB1-GW-050621	K2105233-001	82	100	89
SB2-GW-050621	K2105233-002	78	95	58
SB3-GW-050621	K2105233-003	84	94	62
Method Blank	KQ2108138-03	88	99	109
Lab Control Sample	KQ2108138-01	88	96	102
Duplicate Lab Control Sample	KQ2108138-02	88	94	100

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QA/QC Report

Client: Anchor QEA, LLC **Service Request:**K2105233
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/13/21 15:11

Internal Standard Area and RT SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

File ID: J:\MS14\DATA\051321\0513F002.D\ **Lab Code:**KQ2108270-02
Instrument ID: K-MS-14 **Analysis Lot:**723405
Analysis Method: 8270D **Signal ID:**1

		Acenaphthene-d10		Chrysene-d12		Naphthalene-d8	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	20,720	6.14	37,903	9.80	40,431	4.57
	Upper Limit ==>	41,440	6.64	75,806	10.30	80,862	5.07
	Lower Limit ==>	10,360	5.64	18,952	9.30	20,216	4.07
Associated Analyses							
Method Blank	KQ2108138-03	24131	6.14	35186	9.81	45250	4.57
Lab Control Sample	KQ2108138-01	22101	6.14	36300	9.80	46799	4.57
Duplicate Lab Control Sample	KQ2108138-02	22015	6.14	36312	9.81	46219	4.57
SB1-GW-050621	K2105233-001	23080	6.14	31426	9.80	43882	4.57
SB2-GW-050621	K2105233-002	22252	6.14	31146	9.80	38393	4.57
SB3-GW-050621	K2105233-003	20367	6.14	32465	9.80	37900	4.57

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QA/QC Report

Client: Anchor QEA, LLC **Service Request:**K2105233
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/13/21 15:11

Internal Standard Area and RT SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

File ID: J:\MS14\DATA\051321\0513F002.D\ **Lab Code:**KQ2108270-02
Instrument ID: K-MS-14 **Analysis Lot:**723405
Analysis Method: 8270D **Signal ID:**1

		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**
	Result ==>	39,510	12.60	44,762	7.37
	Upper Limit ==>	79,020	13.10	89,524	7.87
	Lower Limit ==>	19,755	12.10	22,381	6.87
Associated Analyses					
Method Blank	KQ2108138-03	37678	12.62	45383	7.37
Lab Control Sample	KQ2108138-01	39700	12.61	42601	7.38
Duplicate Lab Control Sample	KQ2108138-02	38932	12.61	42248	7.37
SB1-GW-050621	K2105233-001	34746	12.63	41724	7.37
SB2-GW-050621	K2105233-002	35558	12.60	40623	7.37
SB3-GW-050621	K2105233-003	38039	12.60	38820	7.37

Client:	Anchor QEA, LLC	**Service Request:**	K2105233
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/13/21
Sample Matrix:	Water	**Date Extracted:**	05/12/21

Duplicate Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method:	8270D	**Units:**	ug/L
Prep Method:	EPA 3511	**Basis:**	NA
		Analysis Lot:	723405

	Lab Control Sample KQ2108138-01			Duplicate Lab Control Sample KQ2108138-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2-Methylnaphthalene	2.50	2.78	90	2.47	2.78	89	48-120	1	30
Acenaphthene	3.01	2.78	108	2.96	2.78	107	63-121	2	30
Acenaphthylene	2.96	2.78	106	2.90	2.78	104	58-124	2	30
Anthracene	3.03	2.78	109	3.00	2.78	108	68-127	1	30
Benz(a)anthracene	2.90	2.78	104	2.82	2.78	102	74-124	3	30
Benzo(a)pyrene	2.77	2.78	100	2.77	2.78	100	75-131	<1	30
Benzo(b)fluoranthene	3.03	2.78	109	3.03	2.78	109	73-136	<1	30
Benzo(g,h,i)perylene	2.79	2.78	100	2.67	2.78	96	63-127	4	30
Benzo(k)fluoranthene	3.07	2.78	110	3.05	2.78	110	74-134	<1	30
Chrysene	2.99	2.78	108	2.92	2.78	105	74-132	2	30
Dibenz(a,h)anthracene	2.53	2.78	91	2.44	2.78	88	59-135	4	30
Dibenzofuran	3.05	2.78	110	2.99	2.78	108	56-132	2	30
Fluoranthene	2.73	2.78	98	2.68	2.78	96	70-127	2	30
Fluorene	3.02	2.78	109	2.98	2.78	107	68-121	1	30
Indeno(1,2,3-cd)pyrene	2.57	2.78	93	2.51	2.78	90	63-136	2	30
Naphthalene	2.77	2.78	100	2.73	2.78	98	52-115	2	30
Phenanthrene	2.96	2.78	107	2.92	2.78	105	64-126	2	30
Pyrene	3.18	2.78	114	3.10	2.78	112	72-127	2	30

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June 10, 2021

Analytical Report for Service Request No: K2105234

Matt Wilson
Anchor QEA, LLC
6720 S. Macadam Avenue
Suite 125
Portland, OR 97219

RE: Dungeness Reservoir Phase 2 / 201439-01.02

Dear Matt,

Enclosed are the results of the sample(s) submitted to our laboratory May 11, 2021
For your reference, these analyses have been assigned our service request number **K2105234.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2
Sample Matrix: Soil, Water

Service Request: K2105234
Date Received: 05/11/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Twenty soil, water samples were received for analysis at ALS Environmental on 05/11/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 05/21/2021:The lower control criterion was exceeded for Fluorene-d10 in sample A5-SOIL-050721. The error associated with the recovery equated to a slight low bias. The quality of the sample data was not significantly affected. No further corrective action was taken.

Semivoa GC:

No significant anomalies were noted with this analysis.

Metals:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

No significant anomalies were noted with this analysis.

Approved by _____ Date 06/10/2021

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

K2105234

LABORATORY NAME:	ALS - KELSO
LABORATORY ADDRESS:	1317 S. 13th Ave Kelso WA 98626
LABORATORY PHONE:	360-577-7222

Work Order No.:

Project Manager:	Matt Wilson		**Bill to:**		
Client Name:	Anchor QEA, LLC		**Company:**	Anchor QEA, LLC	
Address:	6720 S Macadam Ave Suite 125		**Email:**	labdata@anchorqea.com	
City, State ZIP:	Portland OR 97219				
Email:	mwilson@anchorqea.com	**Phone:** 503-670-1108			
Project Name:	Dungeness Reservoir Phase 2				
Project Number:	201439-01.02				
P.O. Number:	201439-01.02				
Sampler's Name:	M. Wilson				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	

REQUESTED ANALYSIS

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals	7471A - Hg	8082A PCB	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx	Archive (-20 C)	Comments
A1-SOIL-050721	SO	5/07/21	1010		8	X	X	X	X	X	X	X		~~Hold for analysis~~ MW 5/10/21
A2-SOIL-050721			1050		8								X	
A3-SOIL-050721			1110		8	X	X	X	X	X	X	X		NO VOC or TPH-Gx
A4-SOIL-050721			1130		8								X	analyses Requested
A5-SOIL-050721			1200		8	X	X	X	X	X	X	X		
A6-SOIL-050721			1300		5								X	
A7-SOIL-050721			1305		5								X	
B1-SOIL-050721			1330		5	X	X	X	X	X	X	X		
B2-SOIL-050721			1335		5	X	X	X	X	X	X	X		
B3-SOIL-050721			1340		5						MW 5/11/21		X	
B4-SOIL-050721			1345		5							MW 5/11/21	X	
C1-SOIL-050721			1410		5								X	
C2-SOIL-050721			1415		5	X	X	X	X	X	X	X		
C3-SOIL-050721			1430		5								X	
C4-SOIL-050721			1435		5	X	X	X	X	X	X	X		

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson	Matthew Wilson	5/11/21 0915	K Monroe		ALS 5/11/21 0915

Relinquished: K Monroe ALS 5/11/21 1230 Rec: K Monroe ALS 5/11/21 1230

Revised: 5/5/2021

Chain of Custody

K21052354

LABORATORY NAME:	ALS - Kelso
LABORATORY ADDRESS:	1317 S. 13th Ave Kelso WA 98626
LABORATORY PHONE:	360 577 7222

Work Order No.:

Project Manager:	Matt Wilson		**Bill to:**		
Client Name:	Anchor QEA, LLC		**Company:**	Anchor QEA, LLC	
Address:	6720 S Macadam Ave Suite 125		**Email:**	labdata@anchorqea.com	
City, State ZIP:	Portland OR 97219				
Email:	mwilson@anchorqea.com	**Phone:** 503-670-1108			
Project Name:	Dungeness Reservoir Phase 2				
Project Number:	201439-01.02				
P.O. Number:	201439-01.02				
Sampler's Name:	M. Wilson				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	

REQUESTED ANALYSIS

TAT

- [x] Routine
- [ ] Same Day ***
- [ ] Next Day ***
- [ ] 5 Day
- [ ] 7 Day
- [ ] 14 Day

*** Please call for availability

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of containers	6020A Priority 13 metals	7471A - Hg	8082A PCB	NWTPH-Dx	8270D PAH SIM	8260C VOC	NWTPH-Gx	Archive (-20 C)	Comments
C5-SOIL-050721	So	5/07/21	1450		5								X	
C6-SOIL-050721	↓	↓	1500		5								X	
TB-2	W	—	—		1						MW 5/7/21	MW 5/7/21		No VOC or TPH-Gx analysis
TB-3	↓	—	—		1						MW 5/7/21	MW 5/7/21		↓
TB-4		—	—		1						MW 5/7/21	MW 5/7/21		

MW 5/07/21

Comments:

Email Sample Receipt Forms with a copy of the COC, reports and invoices to labdata@anchorqea.com

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Matthew Wilson		5/11/21 0915	K Morrow ALS	K Morrow	5/11/21 0915

Relinquished. K Morrow ALS 5/11/21 1230 Rec'd ALS 5/11/21 1230

Revised: 5/5/2021

PM MH

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K21 05234

Received: 5/11/21 Opened: 5/11/21 By: KL Unloaded: 5/11/21 By: KL

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number (NA)	Filed
2.9		IR01		—	—		
5.0		"					
2.4		"					
3.4		"					

6. Packing material: (*Inserts*) (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/7/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
A1-SOIL-050721	K2105234-001	**67.7**	-	1	05/20/21 15:30	
A3-SOIL-050721	K2105234-003	**78.9**	-	1	05/20/21 15:30	
A5-SOIL-050721	K2105234-005	**82.5**	-	1	05/20/21 15:30	
B1-SOIL-050721	K2105234-008	**89.6**	-	1	05/20/21 15:30	
B2-SOIL-050721	K2105234-009	**85.1**	-	1	05/20/21 15:30	
C2-SOIL-050721	K2105234-013	**79.1**	-	1	05/20/21 15:30	
C4-SOIL-050721	K2105234-015	**75.8**	-	1	05/20/21 15:30	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	05/20/21

Replicate Sample Summary
Inorganic Parameters

Sample Name:	A1-SOIL-050721	**Units:**	Percent
Lab Code:	K2105234-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2105234-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	67.7	67.9	67.8	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Metals

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 10:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A1-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.134**	mg/Kg	0.067	0.027	5	06/10/21 13:01	06/09/21	
Arsenic	6020A	**4.37**	mg/Kg	0.67	0.08	5	06/10/21 13:01	06/09/21	
Beryllium	6020A	**0.336**	mg/Kg	0.027	0.008	5	06/10/21 13:01	06/09/21	
Cadmium	6020A	**0.304**	mg/Kg	0.027	0.009	5	06/10/21 13:01	06/09/21	
Chromium	6020A	**29.2**	mg/Kg	0.27	0.08	5	06/10/21 13:01	06/09/21	
Copper	6020A	**28.7**	mg/Kg	0.13	0.05	5	06/10/21 13:01	06/09/21	
Lead	6020A	**10.7**	mg/Kg	0.067	0.027	5	06/10/21 13:01	06/09/21	
Mercury	7471A	**0.064**	mg/Kg	0.029	0.003	1	06/01/21 10:38	05/28/21	
Nickel	6020A	**30.9**	mg/Kg	0.27	0.04	5	06/10/21 13:01	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.3	0.1	5	06/10/21 13:01	06/09/21	**J**
Silver	6020A	**0.080**	mg/Kg	0.027	0.005	5	06/10/21 13:01	06/09/21	
Thallium	6020A	**0.057**	mg/Kg	0.027	0.005	5	06/10/21 13:01	06/09/21	
Zinc	6020A	**106**	mg/Kg	0.67	0.27	5	06/10/21 13:01	06/09/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 11:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A3-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-003		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.334**	mg/Kg	0.054	0.022	5	06/10/21 13:14	06/09/21	
Arsenic	6020A	**6.00**	mg/Kg	0.54	0.07	5	06/10/21 13:14	06/09/21	
Beryllium	6020A	**0.434**	mg/Kg	0.022	0.007	5	06/10/21 13:14	06/09/21	
Cadmium	6020A	**1.74**	mg/Kg	0.022	0.008	5	06/10/21 13:14	06/09/21	
Chromium	6020A	**39.3**	mg/Kg	0.22	0.07	5	06/10/21 13:14	06/09/21	
Copper	6020A	**38.6**	mg/Kg	0.11	0.04	5	06/10/21 13:14	06/09/21	
Lead	6020A	**24.7**	mg/Kg	0.054	0.022	5	06/10/21 13:14	06/09/21	
Mercury	7471A	**0.031**	mg/Kg	0.023	0.002	1	06/01/21 10:44	05/28/21	
Nickel	6020A	**44.6**	mg/Kg	0.22	0.03	5	06/10/21 13:14	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.1	0.10	5	06/10/21 13:14	06/09/21	**J**
Silver	6020A	**0.065**	mg/Kg	0.022	0.004	5	06/10/21 13:14	06/09/21	
Thallium	6020A	**0.056**	mg/Kg	0.022	0.004	5	06/10/21 13:14	06/09/21	
Zinc	6020A	**91.8**	mg/Kg	0.54	0.22	5	06/10/21 13:14	06/09/21	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 12:00
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A5-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-005		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**1.48**	mg/Kg	0.058	0.023	5	06/10/21 13:17	06/09/21	
Arsenic	6020A	**10.7**	mg/Kg	0.58	0.07	5	06/10/21 13:17	06/09/21	
Beryllium	6020A	**0.214**	mg/Kg	0.023	0.007	5	06/10/21 13:17	06/09/21	
Cadmium	6020A	**2.60**	mg/Kg	0.023	0.008	5	06/10/21 13:17	06/09/21	
Chromium	6020A	**37.5**	mg/Kg	0.23	0.07	5	06/10/21 13:17	06/09/21	
Copper	6020A	**63.1**	mg/Kg	0.12	0.05	5	06/10/21 13:17	06/09/21	
Lead	6020A	**586**	mg/Kg	0.058	0.023	5	06/10/21 13:17	06/09/21	
Mercury	7471A	**0.108**	mg/Kg	0.020	0.002	1	06/01/21 10:46	05/28/21	
Nickel	6020A	**44.2**	mg/Kg	0.23	0.03	5	06/10/21 13:17	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.2	0.1	5	06/10/21 13:17	06/09/21	**J**
Silver	6020A	**0.204**	mg/Kg	0.023	0.005	5	06/10/21 13:17	06/09/21	
Thallium	6020A	**0.041**	mg/Kg	0.023	0.005	5	06/10/21 13:17	06/09/21	
Zinc	6020A	**606**	mg/Kg	0.58	0.23	5	06/10/21 13:17	06/09/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:30
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B1-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-008		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.096**	mg/Kg	0.051	0.020	5	06/10/21 13:19	06/09/21	
Arsenic	6020A	**4.69**	mg/Kg	0.51	0.06	5	06/10/21 13:19	06/09/21	
Beryllium	6020A	**0.410**	mg/Kg	0.020	0.006	5	06/10/21 13:19	06/09/21	
Cadmium	6020A	**0.137**	mg/Kg	0.020	0.007	5	06/10/21 13:19	06/09/21	
Chromium	6020A	**40.1**	mg/Kg	0.20	0.06	5	06/10/21 13:19	06/09/21	
Copper	6020A	**28.8**	mg/Kg	0.10	0.04	5	06/10/21 13:19	06/09/21	
Lead	6020A	**8.79**	mg/Kg	0.051	0.020	5	06/10/21 13:19	06/09/21	
Mercury	7471A	**0.025**	mg/Kg	0.019	0.002	1	06/01/21 10:47	05/28/21	
Nickel	6020A	**39.7**	mg/Kg	0.20	0.03	5	06/10/21 13:19	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.0	0.09	5	06/10/21 13:19	06/09/21	**J**
Silver	6020A	**0.044**	mg/Kg	0.020	0.004	5	06/10/21 13:19	06/09/21	
Thallium	6020A	**0.041**	mg/Kg	0.020	0.004	5	06/10/21 13:19	06/09/21	
Zinc	6020A	**65.7**	mg/Kg	0.51	0.20	5	06/10/21 13:19	06/09/21	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B2-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-009		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.320**	mg/Kg	0.044	0.018	5	06/10/21 13:27	06/09/21	
Arsenic	6020A	**4.73**	mg/Kg	0.44	0.05	5	06/10/21 13:27	06/09/21	
Beryllium	6020A	**0.521**	mg/Kg	0.018	0.005	5	06/10/21 13:27	06/09/21	
Cadmium	6020A	**0.231**	mg/Kg	0.018	0.006	5	06/10/21 13:27	06/09/21	
Chromium	6020A	**37.8**	mg/Kg	0.18	0.05	5	06/10/21 13:27	06/09/21	
Copper	6020A	**26.6**	mg/Kg	0.089	0.035	5	06/10/21 13:27	06/09/21	
Lead	6020A	**24.3**	mg/Kg	0.044	0.018	5	06/10/21 13:27	06/09/21	
Mercury	7471A	**0.014**	mg/Kg	0.020	0.002	1	06/01/21 10:49	05/28/21	**J**
Nickel	6020A	**36.3**	mg/Kg	0.18	0.03	5	06/10/21 13:27	06/09/21	
Selenium	6020A	**0.16**	mg/Kg	0.89	0.08	5	06/10/21 13:27	06/09/21	**J**
Silver	6020A	**0.050**	mg/Kg	0.018	0.004	5	06/10/21 13:27	06/09/21	
Thallium	6020A	**0.051**	mg/Kg	0.018	0.004	5	06/10/21 13:27	06/09/21	
Zinc	6020A	**67.5**	mg/Kg	0.44	0.18	5	06/10/21 13:27	06/09/21	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:15
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C2-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-013		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.114**	mg/Kg	0.051	0.020	5	06/10/21 13:30	06/09/21	
Arsenic	6020A	**4.47**	mg/Kg	0.51	0.06	5	06/10/21 13:30	06/09/21	
Beryllium	6020A	**0.403**	mg/Kg	0.020	0.006	5	06/10/21 13:30	06/09/21	
Cadmium	6020A	**0.182**	mg/Kg	0.020	0.007	5	06/10/21 13:30	06/09/21	
Chromium	6020A	**41.8**	mg/Kg	0.20	0.06	5	06/10/21 13:30	06/09/21	
Copper	6020A	**29.6**	mg/Kg	0.10	0.04	5	06/10/21 13:30	06/09/21	
Lead	6020A	**10.2**	mg/Kg	0.051	0.020	5	06/10/21 13:30	06/09/21	
Mercury	7471A	**0.018**	mg/Kg	0.023	0.002	1	06/01/21 10:51	05/28/21	**J**
Nickel	6020A	**58.6**	mg/Kg	0.20	0.03	5	06/10/21 13:30	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.0	0.09	5	06/10/21 13:30	06/09/21	**J**
Silver	6020A	**0.036**	mg/Kg	0.020	0.004	5	06/10/21 13:30	06/09/21	
Thallium	6020A	**0.035**	mg/Kg	0.020	0.004	5	06/10/21 13:30	06/09/21	
Zinc	6020A	**66.5**	mg/Kg	0.51	0.20	5	06/10/21 13:30	06/09/21	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C4-SOIL-050721	**Basis:**	Dry
Lab Code:	K2105234-015		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	**0.085**	mg/Kg	0.065	0.026	5	06/10/21 13:32	06/09/21	
Arsenic	6020A	**4.47**	mg/Kg	0.65	0.08	5	06/10/21 13:32	06/09/21	
Beryllium	6020A	**0.449**	mg/Kg	0.026	0.008	5	06/10/21 13:32	06/09/21	
Cadmium	6020A	**0.181**	mg/Kg	0.026	0.009	5	06/10/21 13:32	06/09/21	
Chromium	6020A	**38.3**	mg/Kg	0.26	0.08	5	06/10/21 13:32	06/09/21	
Copper	6020A	**26.0**	mg/Kg	0.13	0.05	5	06/10/21 13:32	06/09/21	
Lead	6020A	**11.0**	mg/Kg	0.065	0.026	5	06/10/21 13:32	06/09/21	
Mercury	7471A	**0.017**	mg/Kg	0.023	0.002	1	06/01/21 10:52	05/28/21	J
Nickel	6020A	**37.0**	mg/Kg	0.26	0.04	5	06/10/21 13:32	06/09/21	
Selenium	6020A	**0.2**	mg/Kg	1.3	0.1	5	06/10/21 13:32	06/09/21	J
Silver	6020A	**0.050**	mg/Kg	0.026	0.005	5	06/10/21 13:32	06/09/21	
Thallium	6020A	**0.046**	mg/Kg	0.026	0.005	5	06/10/21 13:32	06/09/21	
Zinc	6020A	**66.0**	mg/Kg	0.65	0.26	5	06/10/21 13:32	06/09/21	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	KQ2108909-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony	6020A	ND U	mg/Kg	0.05	0.020	5	06/10/21 12:56	06/09/21	
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	06/10/21 12:56	06/09/21	
Beryllium	6020A	ND U	mg/Kg	0.020	0.006	5	06/10/21 12:56	06/09/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	06/10/21 12:56	06/09/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	06/10/21 12:56	06/09/21	
Copper	6020A	ND U	mg/Kg	0.10	0.04	5	06/10/21 12:56	06/09/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	06/10/21 12:56	06/09/21	
Nickel	6020A	**0.04 J**	mg/Kg	0.20	0.03	5	06/10/21 12:56	06/09/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	06/10/21 12:56	06/09/21	
Silver	6020A	ND U	mg/Kg	0.020	0.004	5	06/10/21 12:56	06/09/21	
Thallium	6020A	ND U	mg/Kg	0.020	0.004	5	06/10/21 12:56	06/09/21	
Zinc	6020A	ND U	mg/Kg	0.5	0.20	5	06/10/21 12:56	06/09/21	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	KQ2108908-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471A	ND U	mg/Kg	0.02	0.002	1	06/01/21 10:31	05/28/21	

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	06/10/21

Replicate Sample Summary
Total Metals

Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2108909-01 Result	Average	RPD	RPD Limit
Antimony	6020A	0.073	0.029	0.134	0.119	0.127	11	20
Arsenic	6020A	0.73	0.09	4.37	4.20	4.29	4	20
Beryllium	6020A	0.029	0.009	0.336	0.300	0.318	12	20
Cadmium	6020A	0.029	0.010	0.304	0.298	0.301	2	20
Chromium	6020A	0.29	0.09	29.2	28.2	28.7	4	20
Copper	6020A	0.15	0.06	28.7	26.5	27.6	7	20
Lead	6020A	0.073	0.029	10.7	10.5	10.6	2	20
Nickel	6020A	0.29	0.04	30.9	29.4	30.2	5	20
Selenium	6020A	1.5	0.1	0.2 J	0.2 J	0.2	<1	20
Silver	6020A	0.029	0.006	0.080	0.081	0.081	2	20
Thallium	6020A	0.029	0.006	0.057	0.044	0.051	26 #	20
Zinc	6020A	0.73	0.29	106	108	107	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	06/01/21

Replicate Sample Summary
Total Metals

Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2108908-01 Result	Average	RPD	RPD Limit
Mercury	7471A	0.029	0.003	0.064	0.059	0.062	10	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	06/10/21
		Date Extracted:	06/9/21

Matrix Spike Summary
Total Metals

Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry
Analysis Method:	6020A		
Prep Method:	EPA 3050B		

Matrix Spike
KQ2108909-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Antimony	0.134	75.1	146	51 N	75-125
Arsenic	4.37	154	146	103	75-125
Beryllium	0.336	13.7	14.6	92	75-125
Cadmium	0.304	15.6	14.6	105	75-125
Chromium	29.2	97.4	58.5	117	75-125
Copper	28.7	116	73.1	119	75-125
Lead	10.7	172	146	110	75-125
Nickel	30.9	186	146	106	75-125
Selenium	0.2 J	146	146	100	75-125
Silver	0.080	14.7	14.6	100	75-125
Thallium	0.057	31.2	29.2	107	75-125
Zinc	106	258	146	104	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	06/1/21
		Date Extracted:	05/28/21

Matrix Spike Summary
Total Metals

Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry
Analysis Method:	7471A		
Prep Method:	Method		

Matrix Spike
KQ2108908-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	0.064	0.675	0.690	88	60-135

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2/201439-01.02
Sample Matrix: Soil

Service Request: K2105234
Date Analyzed: 06/10/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis: Dry

Lab Control Sample
KQ2108909-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony	6020A	88.2	244	36	10-115
Arsenic	6020A	160	178	90	64-119
Beryllium	6020A	148	172	86	69-115
Cadmium	6020A	139	151	92	67-111
Chromium	6020A	112	126	89	65-121
Copper	6020A	136	151	90	71-118
Lead	6020A	78.4	76.1	103	70-134
Nickel	6020A	79.8	89.2	89	63-117
Selenium	6020A	173	189	92	62-121
Silver	6020A	24.4	25.6	95	65-129
Thallium	6020A	94.3	97.4	97	60-121
Zinc	6020A	311	335	93	65-121

Client: Anchor QEA, LLC
Project: Dungeness Reservoir Phase 2/201439-01.02
Sample Matrix: Soil

Service Request: K2105234
Date Analyzed: 06/01/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis: Dry

Lab Control Sample
KQ2108908-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471A	16.2	26.6	61	41-110

Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 10:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**140**	**H**	37	2.7	1	05/18/21 16:37	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**500**	**Z**	150	5.7	1	05/18/21 16:37	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	101	50 - 150	05/18/21 16:37	
n-Triacontane	131	50 - 150	05/18/21 16:37	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 11:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A3-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-003	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**66**	**H**	31	2.3	1	05/20/21 03:52	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**140**	**Z**	120	4.9	1	05/18/21 23:26	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	83	50 - 150	05/20/21 03:52	
n-Triacontane	86	50 - 150	05/20/21 03:52	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 12:00
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A5-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-005	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**14**	**J**	30	2.2	1	05/20/21 03:30	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**120**	**O**	120	4.7	1	05/18/21 22:00	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	91	50 - 150	05/20/21 03:30	
n-Triacontane	93	50 - 150	05/20/21 03:30	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:30
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-008	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**16**	**J**	28	2.1	1	05/18/21 16:15	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**66**	**J**	110	4.4	1	05/18/21 16:15	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	89	50 - 150	05/18/21 16:15	
n-Triacontane	95	50 - 150	05/18/21 16:15	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B2-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-009	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**14**	**J**	29	2.2	1	05/18/21 15:10	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**61**	**J**	120	4.6	1	05/18/21 15:10	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	88	50 - 150	05/18/21 15:10	
n-Triacontane	90	50 - 150	05/18/21 15:10	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:15
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C2-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-013	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**8.5**	**J**	31	2.3	1	05/18/21 15:32	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**85**	**J**	130	4.9	1	05/18/21 15:32	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	106	50 - 150	05/18/21 15:32	
n-Triacontane	103	50 - 150	05/18/21 15:32	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C4-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-015	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	**5.0**	**J**	33	2.4	1	05/18/21 14:49	5/17/21	
Residual Range Organics (C25 - C36 RRO)	**38**	**J**	130	5.1	1	05/18/21 14:49	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	104	50 - 150	05/18/21 14:49	
n-Triacontane	102	50 - 150	05/18/21 14:49	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KQ2108398-03	**Basis:**	Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	24	1.8	1	05/18/21 14:05	5/17/21	
Residual Range Organics (C25 - C36 RRO)	ND U	98	3.9	1	05/18/21 14:05	5/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	104	50 - 150	05/18/21 14:05	
n-Triacontane	98	50 - 150	05/18/21 14:05	

Client: Anchor QEA, LLC **Service Request:** K2105234

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx

Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl 50-150	n-Triacontane 50-150
A1-SOIL-050721	K2105234-001	101	131
A3-SOIL-050721	K2105234-003	83	86
A5-SOIL-050721	K2105234-005	91	93
B1-SOIL-050721	K2105234-008	89	95
B2-SOIL-050721	K2105234-009	88	90
C2-SOIL-050721	K2105234-013	106	103
C4-SOIL-050721	K2105234-015	104	102
A1-SOIL-050721	KQ2108398-01	102	125
Method Blank	KQ2108398-03	104	98
Lab Control Sample	KQ2108398-02	90	82

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	05/18/21

Replicate Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Sample Name:	A1-SOIL-050721	**Units:**	mg/Kg
Lab Code:	K2105234-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2108398-01 Result	Average	RPD	RPD Limit
Diesel Range Organics (C12 - C25 DRO)	NWTPH-Dx	37	2.7	140 H	180	159	29	40
Residual Range Organics (C25 - C36 RRO)	NWTPH-Dx	150	5.8	500 Z	610	556	20	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/18/21
Sample Matrix:	Soil	**Date Extracted:**	05/17/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method:	NWTPH-Dx	**Units:**	mg/Kg
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	724269

Lab Control Sample
KQ2108398-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	257	267	96	42-134
Residual Range Organics (C25 - C36 RRO)	118	133	88	48-141

Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Anchor QEA, LLC **Service Request:** K2105234
Project: Dungeness Reservoir Phase 2/201439-01.02

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
A1-SOIL-050721	K2105234-001	05/07/2021	05/11/2021
A3-SOIL-050721	K2105234-003	05/07/2021	05/11/2021
A5-SOIL-050721	K2105234-005	05/07/2021	05/11/2021
B1-SOIL-050721	K2105234-008	05/07/2021	05/11/2021
B2-SOIL-050721	K2105234-009	05/07/2021	05/11/2021
C2-SOIL-050721	K2105234-013	05/07/2021	05/11/2021
C4-SOIL-050721	K2105234-015	05/07/2021	05/11/2021
A1-SOIL-050721MS	KWG2101172-1	05/07/2021	05/11/2021
A1-SOIL-050721DMS	KWG2101172-2	05/07/2021	05/11/2021

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	A1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-001	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	29	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	15	4.1	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	90	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	A3-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-003	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	23	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	12	3.3	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	A5-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-005	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	25	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	Ui	13	8.7	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	Ui	17	17	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	Ui	13	13	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	99	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	B1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-008	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	22	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	78	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	B2-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-009	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	22	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	11	3.2	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	C2-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-013	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	25	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	13	3.6	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	84	20-155	05/27/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/2021
Sample Matrix:	Soil	**Date Received:**	05/11/2021

Polychlorinated Biphenyls (PCBs)

Sample Name:	C4-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-015	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1221	ND	U	26	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1232	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1242	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1248	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1254	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1260	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1262	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	
Aroclor 1268	ND	U	13	3.7	1	05/18/21	05/28/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	20-155	05/28/21	Acceptable

Comments:

Analytical Results

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG2101172-4	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1221	ND	U	17	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1232	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1242	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1248	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1254	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1260	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1262	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	
Aroclor 1268	ND	U	10	2.9	1	05/18/21	05/27/21	KWG2101172	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	73	20-155	05/27/21	Acceptable

Comments:

QA/QC Report

Client: Anchor QEA, LLC **Service Request:** K2105234
Project: Dungeness Reservoir Phase 2/201439-01.02
Sample Matrix: Soil

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
A1-SOIL-050721	K2105234-001	90
A3-SOIL-050721	K2105234-003	87
A5-SOIL-050721	K2105234-005	99
B1-SOIL-050721	K2105234-008	78
B2-SOIL-050721	K2105234-009	76
C2-SOIL-050721	K2105234-013	84
C4-SOIL-050721	K2105234-015	88
Method Blank	KWG2101172-4	73
A1-SOIL-050721MS	KWG2101172-1	73
A1-SOIL-050721DMS	KWG2101172-2	91
Lab Control Sample	KWG2101172-3	80

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Extracted:**	05/18/2021
Sample Matrix:	Soil	**Date Analyzed:**	05/27/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	A1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-001	**Basis:**	Dry
Extraction Method:	EPA 3546	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG2101172

		A1-SOIL-050721MS KWG2101172-1 Matrix Spike			A1-SOIL-050721DMS KWG2101172-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	119	147	81	97.2	119	82	44-119	20	40
Aroclor 1260	ND	144	147	98	121	119	102	56-130	17	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Extracted:**	05/18/2021
Sample Matrix:	Soil	**Date Analyzed:**	05/27/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3546	**Units:**	ug/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG2101172

Lab Control Sample
KWG2101172-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	77.9	100	78	44-119
Aroclor 1260	90.1	100	90	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 10:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-001	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**2.3**	**J**	7.2	0.54	1	05/20/21 23:17	5/18/21	
Acenaphthene	**1.1**	**J**	7.2	0.44	1	05/20/21 23:17	5/18/21	
Acenaphthylene	**0.49**	**J**	7.2	0.41	1	05/20/21 23:17	5/18/21	
Anthracene	**0.67**	**J**	7.2	0.43	1	05/20/21 23:17	5/18/21	
Benz(a)anthracene	**1.1**	**J**	7.2	0.34	1	05/20/21 23:17	5/18/21	
Benzo(a)pyrene	ND	U	7.2	0.56	1	05/20/21 23:17	5/18/21	
Benzo(b)fluoranthene	**2.9**	**J**	7.2	0.56	1	05/20/21 23:17	5/18/21	
Benzo(g,h,i)perylene	**2.8**	**J**	7.2	0.58	1	05/20/21 23:17	5/18/21	
Benzo(k)fluoranthene	**0.85**	**J**	7.2	0.35	1	05/20/21 23:17	5/18/21	
Chrysene	**3.7**	**J**	7.2	0.45	1	05/20/21 23:17	5/18/21	
Dibenz(a,h)anthracene	**0.42**	**J**	7.2	0.34	1	05/20/21 23:17	5/18/21	
Dibenzofuran	**1.2**	**J**	7.2	0.87	1	05/20/21 23:17	5/18/21	
Fluoranthene	**4.4**	**J**	7.2	0.92	1	05/20/21 23:17	5/18/21	
Fluorene	**1.2**	**J**	7.2	0.83	1	05/20/21 23:17	5/18/21	
Indeno(1,2,3-cd)pyrene	**1.7**	**J**	7.2	0.53	1	05/20/21 23:17	5/18/21	
Naphthalene	**1.8**	**J**	7.2	0.69	1	05/20/21 23:17	5/18/21	
Phenanthrene	**5.4**	**J**	7.2	0.86	1	05/20/21 23:17	5/18/21	
Pyrene	**3.9**	**J**	7.2	0.47	1	05/20/21 23:17	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	67	38 - 104	05/20/21 23:17	
Fluorene-d10	73	39 - 109	05/20/21 23:17	
Terphenyl-d14	79	38 - 113	05/20/21 23:17	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 11:10
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A3-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-003	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**2.2**	**J**	6.3	0.47	1	05/20/21 23:42	5/18/21	
Acenaphthene	**0.63**	**J**	6.3	0.38	1	05/20/21 23:42	5/18/21	
Acenaphthylene	**2.2**	**J**	6.3	0.36	1	05/20/21 23:42	5/18/21	
Anthracene	**2.9**	**J**	6.3	0.37	1	05/20/21 23:42	5/18/21	
Benz(a)anthracene	**3.3**	**J**	6.3	0.30	1	05/20/21 23:42	5/18/21	
Benzo(a)pyrene	**9.2**		6.3	0.49	1	05/20/21 23:42	5/18/21	
Benzo(b)fluoranthene	**11**		6.3	0.49	1	05/20/21 23:42	5/18/21	
Benzo(g,h,i)perylene	**22**		6.3	0.51	1	05/20/21 23:42	5/18/21	
Benzo(k)fluoranthene	**2.2**	**J**	6.3	0.31	1	05/20/21 23:42	5/18/21	
Chrysene	**7.7**		6.3	0.40	1	05/20/21 23:42	5/18/21	
Dibenz(a,h)anthracene	**3.7**	**J**	6.3	0.30	1	05/20/21 23:42	5/18/21	
Dibenzofuran	**1.5**	**J**	6.3	0.76	1	05/20/21 23:42	5/18/21	
Fluoranthene	**6.3**		6.3	0.80	1	05/20/21 23:42	5/18/21	
Fluorene	**0.94**	**J**	6.3	0.73	1	05/20/21 23:42	5/18/21	
Indeno(1,2,3-cd)pyrene	**17**		6.3	0.46	1	05/20/21 23:42	5/18/21	
Naphthalene	**2.7**	**J**	6.3	0.60	1	05/20/21 23:42	5/18/21	
Phenanthrene	**5.9**	**J**	6.3	0.75	1	05/20/21 23:42	5/18/21	
Pyrene	**7.1**		6.3	0.41	1	05/20/21 23:42	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	71	38 - 104	05/20/21 23:42	
Fluorene-d10	74	39 - 109	05/20/21 23:42	
Terphenyl-d14	82	38 - 113	05/20/21 23:42	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 12:00
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	A5-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-005	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**6.1**	6.0	0.45	1	05/21/21 00:07	5/18/21	
Acenaphthene	**0.56** J	6.0	0.37	1	05/21/21 00:07	5/18/21	
Acenaphthylene	**6.5**	6.0	0.34	1	05/21/21 00:07	5/18/21	
Anthracene	**4.5** J	6.0	0.36	1	05/21/21 00:07	5/18/21	
Benz(a)anthracene	**26**	6.0	0.28	1	05/21/21 00:07	5/18/21	
Benzo(a)pyrene	**27**	6.0	0.46	1	05/21/21 00:07	5/18/21	
Benzo(b)fluoranthene	**32**	6.0	0.46	1	05/21/21 00:07	5/18/21	
Benzo(g,h,i)perylene	**23**	6.0	0.49	1	05/21/21 00:07	5/18/21	
Benzo(k)fluoranthene	**11**	6.0	0.30	1	05/21/21 00:07	5/18/21	
Chrysene	**35**	6.0	0.38	1	05/21/21 00:07	5/18/21	
Dibenz(a,h)anthracene	**4.1** J	6.0	0.28	1	05/21/21 00:07	5/18/21	
Dibenzofuran	**2.3** J	6.0	0.73	1	05/21/21 00:07	5/18/21	
Fluoranthene	**49**	6.0	0.77	1	05/21/21 00:07	5/18/21	
Fluorene	**1.3** J	6.0	0.69	1	05/21/21 00:07	5/18/21	
Indeno(1,2,3-cd)pyrene	**18**	6.0	0.44	1	05/21/21 00:07	5/18/21	
Naphthalene	**12**	6.0	0.57	1	05/21/21 00:07	5/18/21	
Phenanthrene	**28**	6.0	0.72	1	05/21/21 00:07	5/18/21	
Pyrene	**71**	6.0	0.39	1	05/21/21 00:07	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	42	38 - 104	05/21/21 00:07	
Fluorene-d10	38	39 - 109	05/21/21 00:07	*
Terphenyl-d14	46	38 - 113	05/21/21 00:07	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:30
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-008	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**1.2**	**J**	5.5	0.41	1	05/21/21 00:32	5/18/21	
Acenaphthene	**0.40**	**J**	5.5	0.33	1	05/21/21 00:32	5/18/21	
Acenaphthylene	ND	U	5.5	0.31	1	05/21/21 00:32	5/18/21	
Anthracene	ND	U	5.5	0.32	1	05/21/21 00:32	5/18/21	
Benz(a)anthracene	**0.69**	**J**	5.5	0.26	1	05/21/21 00:32	5/18/21	
Benzo(a)pyrene	**1.2**	**J**	5.5	0.42	1	05/21/21 00:32	5/18/21	
Benzo(b)fluoranthene	**1.1**	**J**	5.5	0.42	1	05/21/21 00:32	5/18/21	
Benzo(g,h,i)perylene	**0.60**	**J**	5.5	0.44	1	05/21/21 00:32	5/18/21	
Benzo(k)fluoranthene	ND	U	5.5	0.27	1	05/21/21 00:32	5/18/21	
Chrysene	**1.4**	**J**	5.5	0.34	1	05/21/21 00:32	5/18/21	
Dibenz(a,h)anthracene	ND	U	5.5	0.26	1	05/21/21 00:32	5/18/21	
Dibenzofuran	**1.3**	**J**	5.5	0.66	1	05/21/21 00:32	5/18/21	
Fluoranthene	**1.3**	**J**	5.5	0.69	1	05/21/21 00:32	5/18/21	
Fluorene	ND	U	5.5	0.63	1	05/21/21 00:32	5/18/21	
Indeno(1,2,3-cd)pyrene	**0.46**	**J**	5.5	0.40	1	05/21/21 00:32	5/18/21	
Naphthalene	**2.9**	**J**	5.5	0.52	1	05/21/21 00:32	5/18/21	
Phenanthrene	**2.6**	**J**	5.5	0.65	1	05/21/21 00:32	5/18/21	
Pyrene	**1.2**	**J**	5.5	0.35	1	05/21/21 00:32	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	72	38 - 104	05/21/21 00:32	
Fluorene-d10	73	39 - 109	05/21/21 00:32	
Terphenyl-d14	79	38 - 113	05/21/21 00:32	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 13:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	B2-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-009	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**1.2**	**J**	5.8	0.43	1	05/21/21 00:57	5/18/21	
Acenaphthene	**0.41**	**J**	5.8	0.35	1	05/21/21 00:57	5/18/21	
Acenaphthylene	ND	U	5.8	0.33	1	05/21/21 00:57	5/18/21	
Anthracene	ND	U	5.8	0.34	1	05/21/21 00:57	5/18/21	
Benz(a)anthracene	**0.52**	**J**	5.8	0.27	1	05/21/21 00:57	5/18/21	
Benzo(a)pyrene	**1.0**	**J**	5.8	0.45	1	05/21/21 00:57	5/18/21	
Benzo(b)fluoranthene	**0.89**	**J**	5.8	0.45	1	05/21/21 00:57	5/18/21	
Benzo(g,h,i)perylene	**0.66**	**J**	5.8	0.47	1	05/21/21 00:57	5/18/21	
Benzo(k)fluoranthene	ND	U	5.8	0.28	1	05/21/21 00:57	5/18/21	
Chrysene	**1.3**	**J**	5.8	0.36	1	05/21/21 00:57	5/18/21	
Dibenz(a,h)anthracene	ND	U	5.8	0.27	1	05/21/21 00:57	5/18/21	
Dibenzofuran	**2.3**	**J**	5.8	0.70	1	05/21/21 00:57	5/18/21	
Fluoranthene	**1.7**	**J**	5.8	0.74	1	05/21/21 00:57	5/18/21	
Fluorene	ND	U	5.8	0.67	1	05/21/21 00:57	5/18/21	
Indeno(1,2,3-cd)pyrene	**0.52**	**J**	5.8	0.42	1	05/21/21 00:57	5/18/21	
Naphthalene	**2.1**	**J**	5.8	0.55	1	05/21/21 00:57	5/18/21	
Phenanthrene	**2.8**	**J**	5.8	0.69	1	05/21/21 00:57	5/18/21	
Pyrene	**1.3**	**J**	5.8	0.38	1	05/21/21 00:57	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	65	38 - 104	05/21/21 00:57	
Fluorene-d10	67	39 - 109	05/21/21 00:57	
Terphenyl-d14	71	38 - 113	05/21/21 00:57	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:15
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C2-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-013	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**1.5**	**J**	6.1	0.46	1	05/21/21 01:23	5/18/21	
Acenaphthene	**0.46**	**J**	6.1	0.37	1	05/21/21 01:23	5/18/21	
Acenaphthylene	ND	U	6.1	0.35	1	05/21/21 01:23	5/18/21	
Anthracene	ND	U	6.1	0.36	1	05/21/21 01:23	5/18/21	
Benz(a)anthracene	**0.87**	**J**	6.1	0.29	1	05/21/21 01:23	5/18/21	
Benzo(a)pyrene	**1.8**	**J**	6.1	0.47	1	05/21/21 01:23	5/18/21	
Benzo(b)fluoranthene	**1.6**	**J**	6.1	0.47	1	05/21/21 01:23	5/18/21	
Benzo(g,h,i)perylene	**0.99**	**J**	6.1	0.49	1	05/21/21 01:23	5/18/21	
Benzo(k)fluoranthene	ND	U	6.1	0.30	1	05/21/21 01:23	5/18/21	
Chrysene	**1.7**	**J**	6.1	0.38	1	05/21/21 01:23	5/18/21	
Dibenz(a,h)anthracene	ND	U	6.1	0.29	1	05/21/21 01:23	5/18/21	
Dibenzofuran	**0.91**	**J**	6.1	0.74	1	05/21/21 01:23	5/18/21	
Fluoranthene	**1.7**	**J**	6.1	0.78	1	05/21/21 01:23	5/18/21	
Fluorene	ND	U	6.1	0.70	1	05/21/21 01:23	5/18/21	
Indeno(1,2,3-cd)pyrene	**0.77**	**J**	6.1	0.45	1	05/21/21 01:23	5/18/21	
Naphthalene	**1.6**	**J**	6.1	0.58	1	05/21/21 01:23	5/18/21	
Phenanthrene	**3.3**	**J**	6.1	0.73	1	05/21/21 01:23	5/18/21	
Pyrene	**1.6**	**J**	6.1	0.40	1	05/21/21 01:23	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	68	38 - 104	05/21/21 01:23	
Fluorene-d10	69	39 - 109	05/21/21 01:23	
Terphenyl-d14	78	38 - 113	05/21/21 01:23	

Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21 14:35
Sample Matrix:	Soil	**Date Received:**	05/11/21 12:30
Sample Name:	C4-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-015	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	**2.7**	**J**	6.1	0.46	1	05/21/21 01:48	5/18/21	
Acenaphthene	**1.1**	**J**	6.1	0.37	1	05/21/21 01:48	5/18/21	
Acenaphthylene	ND	U	6.1	0.35	1	05/21/21 01:48	5/18/21	
Anthracene	ND	U	6.1	0.36	1	05/21/21 01:48	5/18/21	
Benz(a)anthracene	**0.56**	**J**	6.1	0.29	1	05/21/21 01:48	5/18/21	
Benzo(a)pyrene	**1.6**	**J**	6.1	0.47	1	05/21/21 01:48	5/18/21	
Benzo(b)fluoranthene	**1.4**	**J**	6.1	0.47	1	05/21/21 01:48	5/18/21	
Benzo(g,h,i)perylene	**0.96**	**J**	6.1	0.50	1	05/21/21 01:48	5/18/21	
Benzo(k)fluoranthene	ND	U	6.1	0.30	1	05/21/21 01:48	5/18/21	
Chrysene	**1.9**	**J**	6.1	0.39	1	05/21/21 01:48	5/18/21	
Dibenz(a,h)anthracene	ND	U	6.1	0.29	1	05/21/21 01:48	5/18/21	
Dibenzofuran	**4.3**	**J**	6.1	0.74	1	05/21/21 01:48	5/18/21	
Fluoranthene	**2.1**	**J**	6.1	0.78	1	05/21/21 01:48	5/18/21	
Fluorene	**0.90**	**J**	6.1	0.71	1	05/21/21 01:48	5/18/21	
Indeno(1,2,3-cd)pyrene	**0.68**	**J**	6.1	0.45	1	05/21/21 01:48	5/18/21	
Naphthalene	**4.5**	**J**	6.1	0.58	1	05/21/21 01:48	5/18/21	
Phenanthrene	**5.6**	**J**	6.1	0.73	1	05/21/21 01:48	5/18/21	
Pyrene	**1.5**	**J**	6.1	0.40	1	05/21/21 01:48	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	74	38 - 104	05/21/21 01:48	
Fluorene-d10	74	39 - 109	05/21/21 01:48	
Terphenyl-d14	83	38 - 113	05/21/21 01:48	

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Analytical Report

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ2108378-04	**Basis:**	Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND	U	4.6	0.37	1	05/20/21 21:36	5/18/21	
Acenaphthene	ND	U	4.6	0.30	1	05/20/21 21:36	5/18/21	
Acenaphthylene	ND	U	4.6	0.28	1	05/20/21 21:36	5/18/21	
Anthracene	ND	U	4.6	0.29	1	05/20/21 21:36	5/18/21	
Benz(a)anthracene	**0.47**	**J**	4.6	0.23	1	05/20/21 21:36	5/18/21	
Benzo(a)pyrene	ND	U	4.6	0.38	1	05/20/21 21:36	5/18/21	
Benzo(b)fluoranthene	ND	U	4.6	0.38	1	05/20/21 21:36	5/18/21	
Benzo(g,h,i)perylene	ND	U	4.6	0.40	1	05/20/21 21:36	5/18/21	
Benzo(k)fluoranthene	ND	U	4.6	0.24	1	05/20/21 21:36	5/18/21	
Chrysene	ND	U	4.6	0.31	1	05/20/21 21:36	5/18/21	
Dibenz(a,h)anthracene	ND	U	4.6	0.23	1	05/20/21 21:36	5/18/21	
Dibenzofuran	ND	U	4.6	0.60	1	05/20/21 21:36	5/18/21	
Fluoranthene	ND	U	4.6	0.63	1	05/20/21 21:36	5/18/21	
Fluorene	ND	U	4.6	0.57	1	05/20/21 21:36	5/18/21	
Indeno(1,2,3-cd)pyrene	ND	U	4.6	0.36	1	05/20/21 21:36	5/18/21	
Naphthalene	ND	U	4.6	0.47	1	05/20/21 21:36	5/18/21	
Phenanthrene	ND	U	4.6	0.59	1	05/20/21 21:36	5/18/21	
Pyrene	**0.50**	**J**	4.6	0.32	1	05/20/21 21:36	5/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	84	38 - 104	05/20/21 21:36	
Fluorene-d10	83	39 - 109	05/20/21 21:36	
Terphenyl-d14	86	38 - 113	05/20/21 21:36	

Client: Anchor QEA, LLC **Service Request:** K2105234

Project: Dungeness Reservoir Phase 2/201439-01.02

Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D

Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10 38-104	Fluorene-d10 39-109	Terphenyl-d14 38-113
A1-SOIL-050721	K2105234-001	67	73	79
A3-SOIL-050721	K2105234-003	71	74	82
A5-SOIL-050721	K2105234-005	42	38*	46
B1-SOIL-050721	K2105234-008	72	73	79
B2-SOIL-050721	K2105234-009	65	67	71
C2-SOIL-050721	K2105234-013	68	69	78
C4-SOIL-050721	K2105234-015	74	74	83
Method Blank	KQ2108378-04	84	83	86
Lab Control Sample	KQ2108378-03	74	73	81
A1-SOIL-050721	KQ2108378-05	63	66	73
A1-SOIL-050721	KQ2108378-06	66	69	76

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC **Service Request:**K2105234
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/20/21 21:11

Internal Standard Area and RT SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

File ID: J:\MS14\DATA\052021\0520F021.D\ **Lab Code:**KQ2108960-02
Instrument ID: K-MS-14 **Analysis Lot:**724400
Analysis Method: 8270D **Signal ID:**1

		Acenaphthene-d10		Chrysene-d12		Naphthalene-d8	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	35,483	6.14	60,632	9.81	69,234	4.56
	Upper Limit ==>	70,966	6.64	121,264	10.31	138,468	5.06
	Lower Limit ==>	17,742	5.64	30,316	9.31	34,617	4.06
Associated Analyses							
Method Blank	KQ2108378-04	42139	6.14	65925	9.81	75071	4.57
Lab Control Sample	KQ2108378-03	38737	6.14	59321	9.81	78702	4.57
A1-SOIL-050721MS	KQ2108378-05	36008	6.14	55488	9.81	77425	4.57
A1-SOIL-050721DMS	KQ2108378-06	36750	6.14	56872	9.81	74470	4.57
A1-SOIL-050721	K2105234-001	39073	6.14	57990	9.81	72452	4.57
A3-SOIL-050721	K2105234-003	39895	6.14	58598	9.81	71064	4.57
A5-SOIL-050721	K2105234-005	42702	6.14	59991	9.81	74039	4.57
B1-SOIL-050721	K2105234-008	42522	6.14	63650	9.81	74039	4.57
B2-SOIL-050721	K2105234-009	42310	6.14	64405	9.81	73478	4.57
C2-SOIL-050721	K2105234-013	42686	6.14	62795	9.81	75041	4.57
C4-SOIL-050721	K2105234-015	40074	6.14	59944	9.81	71198	4.57

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC **Service Request:**K2105234
Project: Dungeness Reservoir Phase 2/201439-01.02 **Date Analyzed:**05/20/21 21:11

Internal Standard Area and RT SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

File ID: J:\MS14\DATA\052021\0520F021.D\ **Lab Code:**KQ2108960-02
Instrument ID: K-MS-14 **Analysis Lot:**724400
Analysis Method: 8270D **Signal ID:**1

		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**
	Result ==>	67,873	12.62	66,823	7.38
	Upper Limit ==>	135,746	13.12	133,646	7.88
	Lower Limit ==>	33,937	12.12	33,412	6.88
Associated Analyses					
Method Blank	KQ2108378-04	76447	12.61	78113	7.38
Lab Control Sample	KQ2108378-03	67935	12.62	73442	7.38
A1-SOIL-050721MS	KQ2108378-05	63931	12.62	69696	7.38
A1-SOIL-050721DMS	KQ2108378-06	65741	12.62	70184	7.38
A1-SOIL-050721	K2105234-001	67987	12.62	73241	7.38
A3-SOIL-050721	K2105234-003	68095	12.62	74045	7.38
A5-SOIL-050721	K2105234-005	70102	12.62	76784	7.38
B1-SOIL-050721	K2105234-008	71967	12.62	77163	7.38
B2-SOIL-050721	K2105234-009	71644	12.62	76550	7.38
C2-SOIL-050721	K2105234-013	70974	12.62	77380	7.38
C4-SOIL-050721	K2105234-015	69212	12.62	72768	7.38

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Collected:**	05/07/21
Sample Matrix:	Soil	**Date Received:**	05/11/21
		Date Analyzed:	05/20/21
		Date Extracted:	05/18/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name:	A1-SOIL-050721	**Units:**	ug/Kg
Lab Code:	K2105234-001	**Basis:**	Dry
Analysis Method:	8270D		
Prep Method:	EPA 3546		

		Matrix Spike KQ2108378-05			**Duplicate Matrix Spike** KQ2108378-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2-Methylnaphthalene	2.3 J	493	717	68	601	732	82	28-98	20	40
Acenaphthene	1.1 J	523	717	73	624	732	85	30-101	18	40
Acenaphthylene	0.49 J	516	717	72	620	732	85	32-97	18	40
Anthracene	0.67 J	538	717	75	647	732	88	27-116	19	40
Benz(a)anthracene	1.1 J	569	717	79	675	732	92	27-127	17	40
Benzo(a)pyrene	ND U	563	717	78	660	732	90	25-129	16	40
Benzo(b)fluoranthene	2.9 J	601	717	83	715	732	97	21-130	17	40
Benzo(g,h,i)perylene	2.8 J	571	717	79	669	732	91	17-130	16	40
Benzo(k)fluoranthene	0.85 J	593	717	83	692	732	94	22-126	15	40
Chrysene	3.7 J	585	717	81	687	732	93	25-132	16	40
Dibenz(a,h)anthracene	0.42 J	555	717	77	657	732	90	32-116	17	40
Dibenzofuran	1.2 J	535	717	74	636	732	87	28-105	17	40
Fluoranthene	4.4 J	534	717	74	636	732	86	10-138	18	40
Fluorene	1.2 J	549	717	76	654	732	89	23-116	17	40
Indeno(1,2,3-cd)pyrene	1.7 J	572	717	79	677	732	92	17-138	17	40
Naphthalene	1.8 J	469	717	65	555	732	76	29-88	17	40
Phenanthrene	5.4 J	525	717	72	631	732	85	10-128	18	40
Pyrene	3.9 J	606	717	84	717	732	97	16-134	17	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	Anchor QEA, LLC	**Service Request:**	K2105234
Project:	Dungeness Reservoir Phase 2/201439-01.02	**Date Analyzed:**	05/20/21
Sample Matrix:	Soil	**Date Extracted:**	05/18/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method:	8270D	**Units:**	ug/Kg
Prep Method:	EPA 3546	**Basis:**	Dry
		Analysis Lot:	724400

Lab Control Sample
KQ2108378-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	389	500	78	43-92
Acenaphthene	400	500	80	44-95
Acenaphthylene	400	500	80	44-93
Anthracene	410	500	82	46-100
Benz(a)anthracene	430	500	86	52-105
Benzo(a)pyrene	425	500	85	52-111
Benzo(b)fluoranthene	452	500	90	52-114
Benzo(g,h,i)perylene	436	500	87	45-107
Benzo(k)fluoranthene	445	500	89	52-112
Chrysene	433	500	87	51-110
Dibenz(a,h)anthracene	425	500	85	44-110
Dibenzofuran	403	500	81	44-96
Fluoranthene	414	500	83	49-102
Fluorene	408	500	82	45-98
Indeno(1,2,3-cd)pyrene	447	500	89	44-117
Naphthalene	383	500	77	42-88
Phenanthrene	400	500	80	41-99
Pyrene	462	500	92	48-104

Apex Laboratories, LLC
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Tuesday, November 23, 2021

Matt Wilson
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A1J0552 - Dungeness Reservoir - 201439-01.02

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 A1J0552, which was received by the laboratory on 10/14/2021 at 11:43:00AM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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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.

Darwin Thomas, Business Development Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DR-101321-01	A1J0552-01	W	10/13/21 09:00	10/14/21 11:43
DR-101321-02	A1J0552-02	W	10/13/21 09:05	10/14/21 11:43

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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

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
DR-101321-01 (A1J0552-01)				**Matrix: W**		**Batch: 21J0763**		
Diesel	ND	99.0	198	ug/L	1	10/22/21 02:13	NWTPH-Dx	
Oil	**671**	198	396	ug/L	1	10/22/21 02:13	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 105 %*		*Limits: 50-150 %*	*1*	*10/22/21 02:13*	*NWTPH-Dx*	
DR-101321-02 (A1J0552-02)				**Matrix: W**		**Batch: 21J0763**		
Diesel	ND	99.0	198	ug/L	1	10/22/21 02:33	NWTPH-Dx	
Oil	**412**	198	396	ug/L	1	10/22/21 02:33	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 92 %*		*Limits: 50-150 %*	*1*	*10/22/21 02:33*	*NWTPH-Dx*	

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ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DR-101321-01 (A1J0552-01)				**Matrix: W**		**Batch: 21J0790**		
Diesel	ND	99.0	198	ug/L	1	10/21/21 23:08	NWTPH-Dx/SG	
Oil	**695**	198	396	ug/L	1	10/21/21 23:08	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		*Recovery: 94 %*		*Limits: 50-150 %*	*1*	*10/21/21 23:08*	*NWTPH-Dx/SG*	
DR-101321-02 (A1J0552-02)				**Matrix: W**		**Batch: 21J0790**		
Diesel	ND	99.0	198	ug/L	1	10/21/21 23:28	NWTPH-Dx/SG	
Oil	**435**	198	396	ug/L	1	10/21/21 23:28	NWTPH-Dx/SG	
Surrogate: o-Terphenyl (Surr)		*Recovery: 80 %*		*Limits: 50-150 %*	*1*	*10/21/21 23:28*	*NWTPH-Dx/SG*	

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ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DR-101321-01 (A1J0552-01)				**Matrix: W**				
Batch: 21J1105								
Arsenic	ND	0.500	1.00	ug/L	1	10/30/21 01:29	EPA 200.8	
Barium	**9.73**	1.00	2.00	ug/L	1	10/30/21 01:29	EPA 200.8	
Cadmium	ND	0.100	0.200	ug/L	1	10/30/21 01:29	EPA 200.8	
Chromium	ND	1.00	2.00	ug/L	1	10/30/21 01:29	EPA 200.8	
Lead	ND	0.100	0.200	ug/L	1	10/30/21 01:29	EPA 200.8	
Mercury	ND	0.0400	0.0800	ug/L	1	10/30/21 01:29	EPA 200.8	
Selenium	ND	0.500	1.00	ug/L	1	10/30/21 01:29	EPA 200.8	
Silver	ND	0.100	0.200	ug/L	1	10/30/21 01:29	EPA 200.8	

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ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DR-101321-01 (A1J0552-01)				**Matrix: W**				
Batch: 21J1079								
Arsenic	ND	0.500	1.00	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Barium	**8.97**	0.500	1.00	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Cadmium	ND	0.100	0.200	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Chromium	ND	1.00	2.00	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Lead	ND	0.100	0.200	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Mercury	ND	0.0400	0.0800	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Selenium	ND	0.500	1.00	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	
Silver	ND	0.100	0.200	ug/L	1	10/30/21 00:58	EPA 200.8 (Diss)	

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ORELAP ID: OR100062

ANALYTICAL REPORT

Anchor QEA, LLC	Project: Dungeness Reservoir	
6720 SW Macadam Ave. Suite 125	Project Number: 201439-01.02	Report ID:
Portland, OR 97219	Project Manager: Matt Wilson	A1J0552 - 11 23 21 0420

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0763 - EPA 3510C (Fuels/Acid Ext.)									Water			
Blank (21J0763-BLK1)				Prepared: 10/21/21 10:42		Analyzed: 10/22/21 01:11						
NWTPH-Dx												
Diesel	ND	90.9	182	ug/L	1	---	---	---	---	---	---	
Oil	ND	182	364	ug/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*	*Limits: 50-150 %*		*Dilution: 1x*						
LCS (21J0763-BS1)				Prepared: 10/21/21 10:42		Analyzed: 10/22/21 01:32						
NWTPH-Dx												
Diesel	977	100	200	ug/L	1	1250	---	78	36-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 110 %*	*Limits: 50-150 %*		*Dilution: 1x*						
LCS Dup (21J0763-BSD1)				Prepared: 10/21/21 10:42		Analyzed: 10/22/21 01:52						Q-19
NWTPH-Dx												
Diesel	958	100	200	ug/L	1	1250	---	77	36-132%	2	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 107 %*	*Limits: 50-150 %*		*Dilution: 1x*						

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0790 - EPA 3510C (Fuels/Acid Ext.) w/Silica Gel + Acid								**Water**				
Blank (21J0790-BLK1)			Prepared: 10/21/21 10:42		Analyzed: 10/21/21 22:07							
NWTPH-Dx/SG												
Diesel	ND	90.9	182	ug/L	1	---	---	---	---	---	---	
Oil	ND	182	364	ug/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*		*Limits: 50-150 %*		*Dilution: 1x*					
LCS (21J0790-BS1)			Prepared: 10/21/21 10:42		Analyzed: 10/21/21 22:28							
NWTPH-Dx/SG												
Diesel	920	100	200	ug/L	1	1250	---	74	36-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 96 %*		*Limits: 50-150 %*		*Dilution: 1x*					
LCS Dup (21J0790-BSD1)			Prepared: 10/21/21 10:42		Analyzed: 10/21/21 22:48							**Q-19**
NWTPH-Dx/SG												
Diesel	901	100	200	ug/L	1	1250	---	72	36-132%	2	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 96 %*		*Limits: 50-150 %*		*Dilution: 1x*					

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Darwin Thomas, Business Development Director

APEX LABORATORIES

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

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J1105 - EPA 3015A							**Water**					
Blank (21J1105-BLK1)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 01:20							
EPA 200.8												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (21J1105-BS1)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 01:25							
EPA 200.8												
Arsenic	57.9	0.500	1.00	ug/L	1	55.6	---	104	85-115%	---	---	
Barium	55.1	1.00	2.00	ug/L	1	55.6	---	99	85-115%	---	---	
Cadmium	56.0	0.100	0.200	ug/L	1	55.6	---	101	85-115%	---	---	
Chromium	53.9	1.00	2.00	ug/L	1	55.6	---	97	85-115%	---	---	
Lead	56.3	0.100	0.200	ug/L	1	55.6	---	101	85-115%	---	---	
Mercury	1.13	0.0400	0.0800	ug/L	1	1.11	---	101	85-115%	---	---	
Selenium	28.3	0.500	1.00	ug/L	1	27.8	---	102	85-115%	---	---	
Silver	27.3	0.100	0.200	ug/L	1	27.8	---	98	85-115%	---	---	
Duplicate (21J1105-DUP1)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 03:08							
QC Source Sample: Non-SDG (A1J0679-02)												
Arsenic	**0.855**	0.500	1.00	ug/L	1	---	0.913	---	---	7	20%	J
Barium	**39.5**	1.00	2.00	ug/L	1	---	39.3	---	---	0.4	20%	
Cadmium	**0.270**	0.100	0.200	ug/L	1	---	0.260	---	---	4	20%	
Chromium	**9.18**	1.00	2.00	ug/L	1	---	11.3	---	---	**21**	**20%**	Q-04
Lead	**6.33**	0.100	0.200	ug/L	1	---	6.42	---	---	1	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (21J1105-MS1)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 03:13							

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Darwin Thomas, Business Development Director

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APEX LABORATORIES

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

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J1105 - EPA 3015A							**Water**					
Matrix Spike (21J1105-MS1)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 03:13							
QC Source Sample: Non-SDG (A1J0679-02)												
EPA 200.8												
Arsenic	57.2	0.500	1.00	ug/L	1	55.6	0.913	101	70-130%	---	---	
Barium	95.1	1.00	2.00	ug/L	1	55.6	39.3	100	70-130%	---	---	
Cadmium	55.0	0.100	0.200	ug/L	1	55.6	0.260	99	70-130%	---	---	
Chromium	64.7	1.00	2.00	ug/L	1	55.6	11.3	96	70-130%	---	---	
Lead	62.5	0.100	0.200	ug/L	1	55.6	6.42	101	70-130%	---	---	
Mercury	1.10	0.0400	0.0800	ug/L	1	1.11	ND	99	70-130%	---	---	
Selenium	27.1	0.500	1.00	ug/L	1	27.8	ND	98	70-130%	---	---	
Silver	26.8	0.100	0.200	ug/L	1	27.8	ND	96	70-130%	---	---	
Matrix Spike (21J1105-MS2)			Prepared: 10/29/21 09:05		Analyzed: 10/30/21 03:22							
QC Source Sample: Non-SDG (A1J0679-03)												
EPA 200.8												
Arsenic	62.8	0.500	1.00	ug/L	1	55.6	3.35	107	70-130%	---	---	
Barium	80.8	1.00	2.00	ug/L	1	55.6	23.2	104	70-130%	---	---	
Cadmium	56.9	0.100	0.200	ug/L	1	55.6	0.118	102	70-130%	---	---	
Chromium	57.0	1.00	2.00	ug/L	1	55.6	1.21	100	70-130%	---	---	
Lead	56.7	0.100	0.200	ug/L	1	55.6	0.313	102	70-130%	---	---	
Mercury	1.07	0.0400	0.0800	ug/L	1	1.11	ND	96	70-130%	---	---	
Selenium	28.1	0.500	1.00	ug/L	1	27.8	ND	101	70-130%	---	---	
Silver	28.0	0.100	0.200	ug/L	1	27.8	ND	101	70-130%	---	---	

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Darwin Thomas, Business Development Director

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J1079 - Matrix Matched Direct Inject							**Water**					
Blank (21J1079-BLK1)			Prepared: 10/28/21 14:20		Analyzed: 10/30/21 00:48							
EPA 200.8 (Diss)												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (21J1079-BS1)			Prepared: 10/28/21 14:20		Analyzed: 10/30/21 00:53							
EPA 200.8 (Diss)												
Arsenic	56.9	0.500	1.00	ug/L	1	55.6	---	102	85-115%	---	---	
Barium	54.1	0.500	1.00	ug/L	1	55.6	---	97	85-115%	---	---	
Cadmium	54.3	0.100	0.200	ug/L	1	55.6	---	98	85-115%	---	---	
Chromium	53.1	1.00	2.00	ug/L	1	55.6	---	96	85-115%	---	---	
Lead	54.8	0.100	0.200	ug/L	1	55.6	---	99	85-115%	---	---	
Mercury	1.05	0.0400	0.0800	ug/L	1	1.11	---	95	85-115%	---	---	
Selenium	26.4	0.500	1.00	ug/L	1	27.8	---	95	85-115%	---	---	
Silver	26.3	0.100	0.200	ug/L	1	27.8	---	95	85-115%	---	---	
Duplicate (21J1079-DUP1)			Prepared: 10/28/21 14:20		Analyzed: 10/30/21 01:02							
QC Source Sample: DR-101321-01 (A1J0552-01)												
EPA 200.8 (Diss)												
Arsenic	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Barium	**8.90**	0.500	1.00	ug/L	1	---	8.97	---	---	0.8	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Mercury	**0.0555**	0.0400	0.0800	ug/L	1	---	ND	---	---		**20%**	J
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (21J1079-MS1)			Prepared: 10/28/21 14:20		Analyzed: 10/30/21 01:07							

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Darwin Thomas, Business Development Director

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Anchor QEA, LLC	Project: **Dungeness Reservoir**	
6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J1079 - Matrix Matched Direct Inject							**Water**					
Matrix Spike (21J1079-MS1)			Prepared: 10/28/21 14:20 Analyzed: 10/30/21 01:07									
QC Source Sample: DR-101321-01 (A1J0552-01)												
EPA 200.8 (Diss)												
Arsenic	57.5	0.500	1.00	ug/L	1	55.6	ND	104	70-130%	---	---	
Barium	63.5	0.500	1.00	ug/L	1	55.6	8.97	98	70-130%	---	---	
Cadmium	56.0	0.100	0.200	ug/L	1	55.6	ND	101	70-130%	---	---	
Chromium	53.3	1.00	2.00	ug/L	1	55.6	ND	96	70-130%	---	---	
Lead	55.2	0.100	0.200	ug/L	1	55.6	ND	99	70-130%	---	---	
Mercury	1.09	0.0400	0.0800	ug/L	1	1.11	ND	98	70-130%	---	---	
Selenium	27.9	0.500	1.00	ug/L	1	27.8	ND	100	70-130%	---	---	
Silver	28.1	0.100	0.200	ug/L	1	27.8	ND	101	70-130%	---	---	

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J0763							
A1J0552-01	W	NWTPH-Dx	10/13/21 09:00	10/21/21 10:42	1010mL/5mL	1000mL/5mL	0.99
A1J0552-02	W	NWTPH-Dx	10/13/21 09:05	10/21/21 10:42	1010mL/5mL	1000mL/5mL	0.99

Diesel and/or Oil Hydrocarbons by NWTPH-Dx with Acid/Silica Gel Cleanup

Prep: EPA 3510C (Fuels/Acid Ext.) w/Silica Gel + Acid

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J0790							
A1J0552-01	W	NWTPH-Dx/SG	10/13/21 09:00	10/21/21 10:42	1010mL/5mL	1000mL/5mL	0.99
A1J0552-02	W	NWTPH-Dx/SG	10/13/21 09:05	10/21/21 10:42	1010mL/5mL	1000mL/5mL	0.99

Total Metals by EPA 200.8 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J1105							
A1J0552-01	W	EPA 200.8	10/13/21 09:00	10/29/21 09:05	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J1079							
A1J0552-01	W	EPA 200.8 (Diss)	10/13/21 09:00	10/28/21 14:20	45mL/50mL	45mL/50mL	1.00

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6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

QUALIFIER DEFINITIONS

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

Apex Laboratories

J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.

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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

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6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

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

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

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

QC Source:

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

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

Miscellaneous Notes:

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

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

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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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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ANALYTICAL REPORT

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Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

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

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP 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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ANALYTICAL REPORT

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6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
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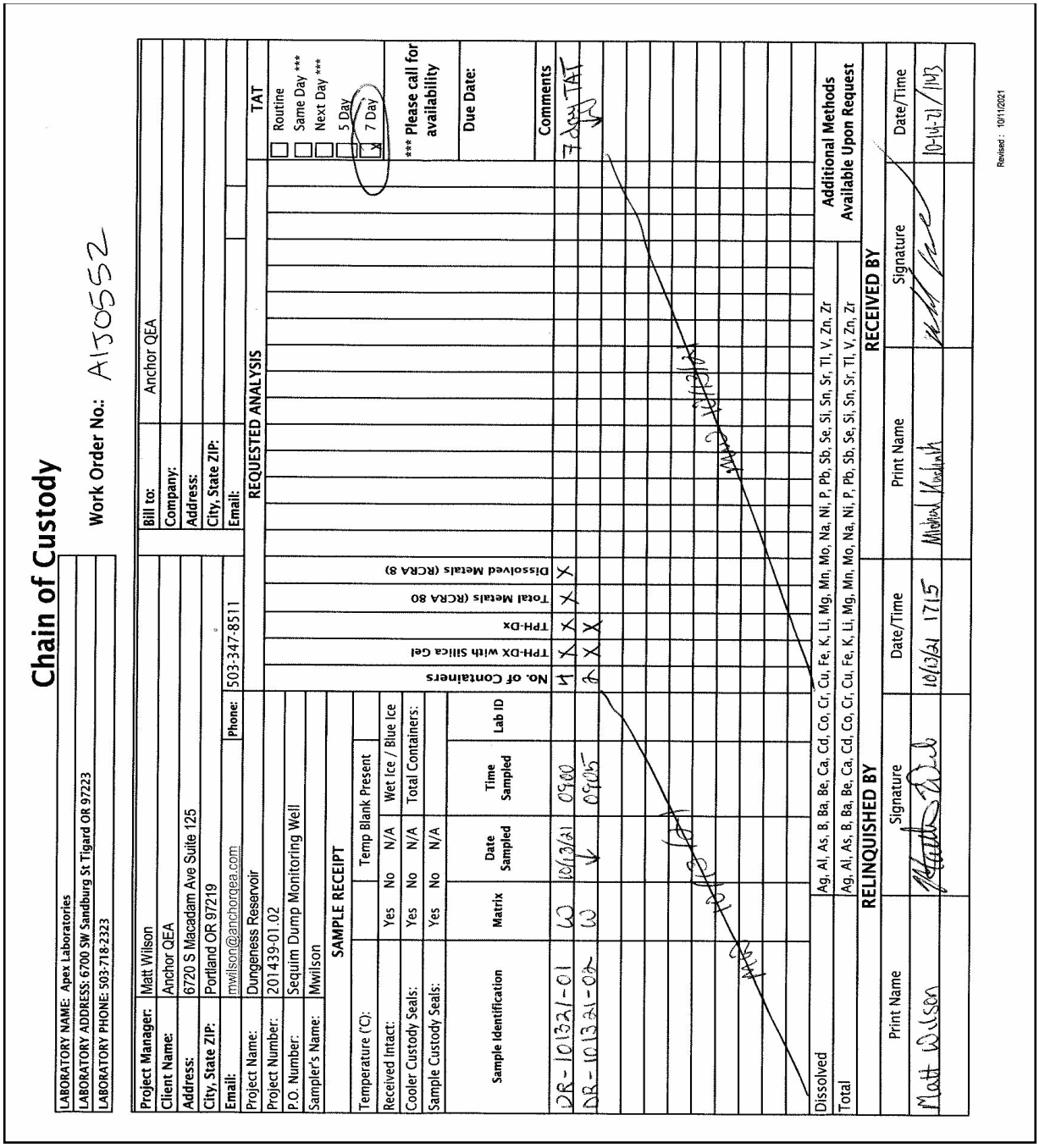

Chain of Custody

Work Order No.: A1J0552

LABORATORY NAME: Apex Laboratories
LABORATORY ADDRESS: 6700 SW Sandburg St Tigard OR 97223
LABORATORY PHONE: 503-718-2323

Project Manager: Matt Wilson
Client Name: Anchor QEA
Address: 6720 S Macadam Ave Suite 125
City, State ZIP: Portland OR 97219
Email: mwilson@anchorqea.com
Phone: 503-347-8511
Project Name: Dungeness Reservoir
Project Number: 201439-01.02
P.O. Number: Sequim Dump Monitoring Well
Sampler's Name: Mwilson

Bill to: Anchor QEA
Company:
Address:
City, State ZIP:
Email:

SAMPLE RECEIPT
Temperature (°C):
Temp Blank Present
Received Intact: Yes No N/A
Wet Ice / Blue Ice
Cooler Custody Seals: Yes No N/A
Total Containers:
Sample Custody Seals: Yes No N/A

REQUESTED ANALYSIS

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	TPH-DX with Silica Gel	TPH-DX	Total Metals (RCRA 8)	Dissolved Metals (RCRA 8)
DR-101321-01	SO	10/13/21	0900		1	X	X	X	X
DR-101321-02	SO	↓	0905		2	X	X		

Dissolved: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr
Total: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr

TAT: Routine; Same Day ***; Next Day ***; 5 Day; 7 Day (X)
*** Please call for availability
Due Date:
Comments: 7 day TAT

Additional Methods Available Upon Request

RELINQUISHED BY

Print Name	Signature	Date/Time
Matt Wilson		10/13/21 1715

RECEIVED BY

Print Name	Signature	Date/Time
Michael Kirkland		10-14-21 1143

Revised: 10/1/2021

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ANALYTICAL REPORT

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6720 SW Macadam Ave. Suite 125	Project Number: **201439-01.02**	**Report ID:**
Portland, OR 97219	Project Manager: **Matt Wilson**	**A1J0552 - 11 23 21 0420**

APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A1 J0552

Project/Project #: Dungeness Reservoir / 201439-01.02

Delivery Info:

Date/time received: 10-14-21 @ 1143 By: MK

Delivered by: Apex X Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 10-14-21 @ 1355 By: MK

Chain of Custody included? Yes X No Custody seals? Yes X No

Signed/dated by client? Yes X No

Signed/dated by Apex? Yes X No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 10/14/21 @ 1641 By: HAS

All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes X No Comments: DR-101321-01 : 1/2 polys has no time on container

COC/container discrepancies form initiated? Yes No X

Containers/volumes received appropriate for analysis? Yes X No Comments:

Do VOA vials have visible headspace? Yes No NA X

Comments

Water samples: pH checked: Yes X No NA pH appropriate? Yes X No NA

Comments:

Additional information:

Labeled by: HAS Witness: Cooler Inspected by: HAS

Apex Laboratories

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.

Darwin Thomas, Business Development Director