
APPENDIX I

Soils Sampling Results

Soil Sampling Report of Results Sediment Collection, Leach Testing, and Analysis

Whitewater River Groundwater Replenishment Facility Right of Way Grant Project

Riverside County, California

Prepared for:

Coachella Valley Water District

U.S. Bureau of Land Management

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LIST OF ACRONYMS AND ABBREVIATIONS

BLM	U.S. Department of the Interior, Bureau of Land Management
CaCO ₃	calcium carbonate
CEC	cation exchange capacity
CVWD	Coachella Valley Water District
D10	10 percent of the sample is smaller than or equal to this grain size (in millimeters)
D30	30 percent of the sample is smaller than or equal to this grain size (in millimeters)
D60	60 percent of the sample is smaller than or equal to this grain size (in millimeters)
DWA	Desert Water Agency
DRO	diesel range organics
Facility	Whitewater River Groundwater Replenishment Facility
MBAS	methylene blue active substances
mg/kg	milligrams per kilogram
mg/L	milligrams per liter (equivalent to parts per million)
Metropolitan	Metropolitan Water District of Southern California
NA	not applicable
ND	not detected
NEPA	National Environmental Policy Act
ORO	oil range organics
Project	Whitewater River Groundwater Replenishment Facility Right of Way Grant Project
SP	poorly-graded sand
SM	silty sand
SW	well-graded sand
TDS	total dissolved solids
umhos/cm	micromhos/centimeter
USCS	Unified Soil Classification System
VOC	volatile organic compounds
WET	waste extraction test

1.0 INTRODUCTION

As part of the Whitewater River Groundwater Replenishment Facility (Facility) Right of Way Grant project (Project), Coachella Valley Water District (CVWD) (Project Applicant) and the U.S. Department of Interior, Bureau of Land Management (BLM) (National Environmental Policy Act [NEPA] Lead Agency) have retained ECORP Consulting, Inc. (ECORP) to conduct technical studies and prepare an Environmental Impact Statement (EIS) in support of the Project. One of the technical studies to support the EIS includes sampling and analysis of soils and sediment within and adjacent to the Project site. The objectives and procedures for the soil and sediment sampling activities are presented in the Project's *Field Sampling Plan* prepared by ECORP (Field Sampling Plan) (ECORP 2019).

This report describes the purpose and objectives of the sampling program, summarizes the field data collection activities, presents the laboratory analytical data, and provides an evaluation of the potential effects that operation of the Facility may have on groundwater quality. Appendix A contains the figures referenced in this report.

2.0 BACKGROUND

CVWD and the Desert Water Agency (DWA) have an exchange agreement with Metropolitan Water District of Southern California (Metropolitan) whereby Metropolitan receives CVWD's and DWA's allocations from the State Water Project and Metropolitan delivers water from the Colorado River Aqueduct for groundwater replenishment at the Facility. The Facility includes a series of gates and diversion channels that distribute the Colorado River water into 19 replenishment ponds or recharge basins. Table 1 provides the surface area and capacity of each of the replenishment ponds. Figure 1 shows the layout of the Facility.

Table 1. Replenishment Pond Surface Area and Capacity		
	Surface Area (square feet)	Capacity (gallons)¹
Pond 1	573,685	21,457,285
Pond 2	762,735	28,528,250
Pond 3	885,139	33,106,456
Pond 4	1,084,644	40,568,442
Pond 5	1,089,000	40,731,428
Pond 6	771,883	28,870,436
Pond 7	1,264,982	47,310,368
Pond 8	1,379,109	51,582,281
Pond 9	1,504,562	56,281,058
Pond 10	1,569,902	58,718,427
Pond 11	1,738,044	65,007,360
Pond 12	1,776,812	66,457,398
Pond 13	1,925,787	72,029,458
Pond 14	2,163,625	80,925,202

Table 1. Replenishment Pond Surface Area and Capacity		
	Surface Area (square feet)	Capacity (gallons)¹
Pond 15	2,231,143	83,450,550
Pond 16	2,259,021	84,493,275
Pond 17	2,342,221	87,605,156
Pond 18	2,408,432	90,081,627
Pond 19	2,505,571	93,714,870

Notes:¹capacity based on a pond depth of 5 feet

3.0 PURPOSE AND OBJECTIVE

As described in the Field Sampling Plan (ECORP 2019), the purpose of the field program is to obtain soil and sediment samples from within and adjacent to the replenishment ponds that are appropriate to evaluate whether constituents that could affect water quality are accumulating in or leaching from the soils and sediments within the Facility. The primary objective of the technical study is to obtain data that contributes to the overall evaluation of the potential impacts of the Right of Way Grant Renewal Project on groundwater quality within the Indio Subbasin of the Coachella Valley groundwater basin (DWR subbasin 7-21.01) as part of the larger NEPA evaluation of the Project.

4.0 SAMPLE COLLECTION

Sampling was conducted from March 2 to March 4, 2020. As described in the Field Sampling Plan, the ponds to be sampled were selected based on a range of operating conditions, from ponds that are at the initial point of diversion into the Facility to those at the downstream end. The goal was to sample ponds that receive water and are wet most of the time, ponds that receive water at lower frequencies (primarily during years where diversions to the Facility are highest), and ponds in between. Based on the way that the ponds are managed, samples were to be collected from six specific ponds, to include Ponds 1, 2, 5, 10, 14, and 19. For each pond, a 100 foot by 100 foot grid was established and a random number generator (www.random.org) used to select five sampling locations and one alternate location for each of the six ponds.

Prior to the sampling, CVWD had been conducting maintenance in the ponds that consisted of excavating and removing accumulated sediment. Upon arriving in the field on March 2, 2020, ECORP staff were informed that some of the selected ponds (Ponds 1, 2, and 10) still contained water or wet sediment that precluded CVWD staff from accessing those areas with an excavator to assist with sample collection. Because Metropolitan was planning to initiate water diversion into the Facility on March 6, 2020, the sampling could not be delayed to wait for the ponds to further dry out. As a result, the accessible areas of Ponds 1 and 2 were reduced, as indicated on Figure 2. Pond 12, the closest accessible pond to Pond 10, was substituted for Pond 10, which was completely inaccessible (Figure 2). In addition, the grids for each pond had to be adjusted because the CVWD equipment operator was unable to maneuver the excavator to sample at grid locations that were on or immediately adjacent to the side slopes of the ponds, out of concern for maintaining the stability and integrity of the pond side slopes. Thus, the grid areas for each

of the selected ponds were revised and the random grid locations redefined using the same random number generator. Figures 3 through 10 show the pond areas that were selected for sampling, the revised grids, and the five random sampling grid locations within each pond.

The specific sampling locations were identified on the field with a handheld iPad GPS system. At each location, CVWD staff used an excavator to dig a pit at least six feet below the surface, into the native soils. Once reaching that depth, soil from the excavator bucket was placed into a labelled zip top bag with the use of a clean hand trowel. The zip top bags were delivered to the laboratory so the laboratory could create composite samples. At each location, soil from the same excavator bucket was also placed into a five-gallon bucket, to be archived in the event additional analysis is required. Soils collected were chosen at random from the excavator bucket, with the inclusion of any visible anomalies or soil color gradations. Photographs were taken of each hole and excavator bucket prior to sampling. Once the soil samples were collected and labelled, the hole was backfilled and compacted prior to moving to the next location. The field photographs are provided in Appendix B.

Table 2 lists the total 100 foot by 100 foot grids in each pond area that was sampled along with the specific grid locations that were sampled for each pond. The grids are shown on Figures 3 through 10.

Table 2. Composite Sampling Locations						
Pond	Total Grids	Grid Numbers Sampled				
1	31	10	15	18	25	26
2	34	9	9	11	21	34
5	140	30	81	111	118	138
12	225	18	36	55	101	138
14	220	20	133	137	157	188
19	332	22	85	101	244	329
Background Area B	90	20	46	72	82	87

Background sampling was initially planned for Background Area A, as shown on Figure 2. However, due to property access issues, the background sampling location had to be relocated. A composite background sample was collected from Background Area B, shown on Figures 3 and 8. Background Area B is located east of the replenishment ponds in native soils. Soil samples were collected from the five randomly-selected grid locations listed in Table 2 and shown on Figure 8. The background soil samples were collected with a hand trowel at a depth of six inches below ground surface. The background sample represents soil conditions outside of the area of influence of the diversion, percolation, or evaporative loss of water from the Colorado River Aqueduct.

The Field Sampling Plan originally identified an area east of the recharge basins to sample sediment placement piles from previous maintenance events (Deposition Site Southeast on Figure 2). Sediment from the piles is placed in this location to replenish sand dune habitat for biological resources. However, during the sampling period, there were no placement piles located in this area. Samples were taken from the deposition site from the most recent maintenance (Figure 4).

In addition to the sampling described in the Field Sampling Plan, the following additional samples were collected:

- A sample of native water from the Whitewater River. Diversions from the Colorado River Aqueduct were not occurring, and had not occurred for some time prior to, the collection of the native water sample. This sample was obtained to provide a limited set of basic water chemistry parameters of local runoff for comparison with Colorado River Aqueduct water and the deionized water used for the leaching tests (see additional discussion in Section 5). The sample location is shown on Figures 3 and 4.
- Upstream control samples were collected on March 4, 2020 from randomly selected easily accessible locations within the Whitewater River channel just upstream of the CVWD facility (Figure 4). Five samples were collected on the west and east sides of the active channel with a hand trowel from a depth of six inches below the surface and composited. This composite sample was collected to compare the total and leaching results of sediments within the river with the soils under the replenishment ponds.
- Five samples from the sediment placement piles at the Deposition Site that resulted from the CVWD maintenance and excavation of the ponds were collected with a hand trowel and composited (Figure 4). The composite sample was collected to provide data that can be used to assess potential effects on air quality of the sand replenishment program. Thus, the data from the sediment placement piles is not addressed further in this report but will be assessed in the air quality section of the NEPA document.

5.0 LABORATORY PROCEDURES AND ANALYTICAL METHODS

Samples were delivered to Babcock Laboratories, Inc. in Riverside, California under appropriate chain-of-custody procedures. The discrete samples collected in zip top bags were composited by laboratory staff to create the composite samples described above. The compositing was conducted in the laboratory to maintain quality control and ensure uniform procedures were performed for each composite.

After the composite samples were created, each composite was split into three subsamples. One subsample from each composite was analyzed for total (solid) concentrations of the constituents listed below. For the other two subsamples, the laboratory conducted leach tests based on the United States Environmental Protection Agency (USEPA) Waste Extraction Test (WET) methodology using two different fluids, deionized water and Colorado River Aqueduct water, as discussed in the Field Sampling Plan.

The soil (total) samples were analyzed for:

- Title 22 metals plus aluminum, iron, manganese, and mercury;
- Total organic carbon; and
- Total petroleum hydrocarbons.

The leachate samples and the Colorado River Aqueduct water were analyzed for the constituents listed above, plus the following:

- General minerals and salts, to include calcium, magnesium, sodium, potassium, chloride, sulfate, bicarbonate, total alkalinity, total dissolved solids, specific conductance, pH, nitrate, total phosphorus, fluoride, and methylene blue active substances (foaming agents, abbreviated as MBAS).

The Whitewater River water sample was analyzed for a limited set of general minerals, including total hardness, calcium, magnesium, bicarbonate, total alkalinity, total dissolved solids, specific conductance, and pH.

The composite sample from the sediment placement piles was analyzed for:

- Title 22 metals plus aluminum, iron, manganese, and mercury;
- Total organic carbon; and
- Total petroleum hydrocarbons.

In addition to the above chemical parameters, the composite soil samples were also analyzed for cation exchange capacity (CEC) by HDRT in Claremont, California and for grain size distribution using sieve analyses by Ninyo and Moore in Irvine, California.

The laboratory analytical data sheets are provided in Appendix C.

6.0 FINDINGS

The discussion presented below in this section describes the laboratory results and interpretations for the soil sample solid analyses, the Whitewater River and Colorado River Aqueduct water, the deionized water leachate results, and the Colorado River Aqueduct leachate results.

6.1 Soil Sample Solid Analyses

Table 3 presents the results of the CEC and grain size analyses. The composited samples are predominantly coarse to medium sand. Approximately 20 percent of the material in the soils from Ponds 12, 14, and 19 consists of gravel. For all the samples, except that from Pond 5, 10 percent or less of the sample consists of fine material (i.e. silt or clay). For the Pond 5 composite sample, 19 percent of the material was silt or clay. The upstream wash and the background samples tend to be predominantly medium to fine sand, but still with low fractions of silt and clay (5% and 3%, respectively). The sieve analysis results are consistent with the field photos that were taken at the time the samples were collected (Appendix B).

Table 3. Sieve Analysis and Cation Exchange Capacity Results						
Sample	D₁₀	D₃₀	D₆₀	Percent Passing No. 200 Sieve	USCS	CEC
Pond 1	0.18	0.5	1.54	3	SP	2.8
Pond 2	0.24	0.6	4.75	4	SP	2.8
Pond 5	<0.08	0.3	0.8	19	SM	4.2
Pond 12	0.08	0.52	2.03	10	SW-SM	5.1
Pond 14	0.19	0.54	2.5	3	SP	3.4
Pond 19	0.21	0.48	1.6	2	SP	4.5
Upstream Wash	0.11	0.5	4.5	5	SP-SM	3.8
Background	0.15	0.27	0.51	3	SP	2.9

Notes:D₁₀ = 10 percent of the sample is smaller than or equal to this grain size (in millimeters)D₃₀ = 30 percent of the sample is smaller than or equal to this grain size (in millimeters)D₆₀ = 60 percent of the sample is smaller than or equal to this grain size (in millimeters)

Percent Passing No. 200 Sieve = the fraction of the sample that is silt or clay-sized

USCS = Unified Soil Classification System soil-type designation

SP = poorly-graded sand

SW = well-graded sand

SM = silty sand

Due to the lack of any appreciable amount of clay in the composited samples, the CEC values are very low, ranging from 2.8 to 5.1 milliequivalents per 100 kg of soil. The CEC of clayey soils typically ranges from 10 to over 100 milliequivalents per 100 kg of soil. The low CEC values indicate that the soils do not have the capacity to retain nutrients, salts, and metals that have a positive ionic charge as water passes through the soil matrix. The CEC results suggest that there should not be a residual load of salts or metals in the soils that could leach over time or create a pulse if conditions changed at the Facility.

Table 4 presents the analytical results for the analysis of the composite soil samples. Total organic carbon and petroleum hydrocarbons were not detected in any of the samples collected, including the sediments excavated from the ponds and deposited in the sediment placement area. Soils with organic carbon will generally adsorb and retain organic contaminants, and some ionic compounds and metals, that are present in water that passes through the soils. The lack of organic carbon in the soils indicates that if organic contaminants are or were present in Colorado River Aqueduct water that was provided to the replenishment ponds, those contaminants would not be retained in the soils. The lack of petroleum hydrocarbons, which consist of organic chemicals, in the soils is consistent with the lack of total organic carbon in the soils. The lack of petroleum hydrocarbons in the soils and pond sediments also suggests that significant amounts of chemicals and contaminants are not being introduced to the Facility due to runoff from local roads and highways into the Whitewater River.

Table 4. Soil Sample Analytical Results

Metal	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background	Sediment Placement
Aluminum	mg/kg	10	8,700	6,900	7,400	8,100	7,000	8,000	7,100	6,400
Antimony	mg/kg	1.0	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	1.0	ND	ND	ND	1.1	1.1	ND	ND	ND
Barium	mg/kg	1.0	45	42	40	47	44	48	44	44
Beryllium	mg/kg	1.0	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	mg/kg	1.0	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium	mg/kg	1.0	9.5	8.6	8.3	13	7.1	9.6	9.2	8.3
Cobalt	mg/kg	1.0	3.8	3.9	3.5	4.5	3.7	4.1	4.3	3.7
Copper	mg/kg	1.0	5.9	6.3	8.2	9	6.9	8.4	8.2	6.7
Iron	mg/kg	20	15,000	13,000	13,000	14,000	13,000	14,000	14,000	11,000
Lead	mg/kg	2.0	2.0	2.2	4.4	2.7	2.2	2.3	2.2	ND
Manganese	mg/kg	10	180	190	180	240	180	210	180	180
Mercury	mg/kg	0.050	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/kg	5.0	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	1.0	5.5	5.6	5.5	6.8	4.8	5.7	5.6	5.2
Selenium	mg/kg	5.0	ND	ND	ND	ND	ND	ND	ND	ND
Silver	mg/kg	1.0	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	mg/kg	1.0	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	1.0	17	20	20	25	19	22	23	20
Zinc	mg/kg	1.0	30	29	28	36	28	34	32	34
Total Organic Carbon	%	0.19	ND	ND	ND	ND	ND	ND	ND	ND
Petroleum Hydrocarbons										
Diesel Range Organics										
DRO (C10-C28)	mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND
ORO (C29-C44_	mg/kg	10	ND	ND	ND	ND	ND	ND	ND	ND
Gasoline Range Organics	mg/kg	5.0	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
mg/kg = milligrams per kilogram
ND = not detected

The predominant metals present within the native soils are aluminum and iron. Other metals that were consistently present in the samples include barium, chromium, cobalt, copper, lead, manganese, nickel, vanadium, and zinc. The background sample results presented in Table 4 fall within the range of results from the six replenishment ponds. The metals present in the sample from the sediment placement area,

representing the material that accumulates in the pond as water is diverted into the facility, fall within or just below the low end of the range for the samples from the six replenishment ponds. Therefore, the soils and sediments associated with the Facility appear to have a fairly uniform mineral content. Due to the consistency of the individual metals present and the range of metals concentrations present in the samples from the soils beneath the ponds, the pond sediments, and the background soils, the detected metals are interpreted to be naturally occurring components of the geologic materials that were eroded to form the soils and sediments in the Whitewater River floodplain.

6.2 Water Sample Analyses

Simulation of different percolation and leaching conditions was conducted by the analytical laboratory using deionized water and Colorado River Aqueduct water. The deionized water was supplied by the analytical laboratory. The Colorado River Aqueduct water was provided by the Metropolitan Water District of Southern California (Metropolitan) and obtained from the intake to the aqueduct at Lake Havasu near Parker Dam on May 5, 2020. According to Metropolitan staff, the intake to the aqueduct is located at about mid-depth in the lake, about 12 meters below the lake surface, and the lake elevation remains relatively stable throughout the year (email correspondence from Maria T. Lopez, Interim Water Purification Unit Manager, Water Quality Section, May 6, 2020). Thus, the intake water is not affected by floating debris near the lake surface or dense contaminants that could accumulate on the lake bottom, if present.

As discussed above, natural flow within the Whitewater River was observed during the soil sample collection field activities. To provide an indication of the chemistry of the natural flow in the Whitewater River, a sample was collected on March 4, 2020 (Figure 4).

The deionized water does not contain any measurable salts, minerals, or metals. The analytes tested for in the Colorado River Aqueduct and Whitewater River samples are described in Section 5. Table 5 presents the analytical results for the water samples.

The Colorado River Aqueduct water had a total dissolved solids (TDS) concentration of 570 milligrams per liter (mg/L) and a pH of 8.3. The primary mineral and salt constituents were calcium, sodium, bicarbonate, and sulfate.

The Whitewater River water had a TDS concentration of 220 mg/L and a pH of 8.3. The primary mineral and salt constituents were calcium and bicarbonate.

Table 5. Water Sample Analytical Results				
Parameter	Units	Reporting Limit	Colorado River Aqueduct	Whitewater River
Hardness, Total	mg/L	6	280	180
Calcium	mg/L	1	72	50
Magnesium	mg/L	1	24	13
Sodium	mg/L	1	83	NA

Table 5. Water Sample Analytical Results				
Parameter	Units	Reporting Limit	Colorado River Aqueduct	Whitewater River
Potassium	mg/L	1	4.3	NA
Alkalinity, total	mg/L as CaCO ₃	5	140	160
Hydroxide	mg/L as CaCO ₃	5	ND	ND
Carbonate	mg/L as CaCO ₃	5	ND	ND
Bicarbonate	mg/L as CaCO ₃	5	140	160
Chloride	mg/L	1	90	NA
Sulfate	mg/L	0.5	210	NA
Nitrate as N	mg/L	0.2	ND	NA
Fluoride	mg/L	0.1	0.3	NA
pH	Std Units	1	8.3	8.3
Specific Conductance	umhos/cm	1	930	380
Total Dissolved Solids	mg/L	10	570	220
Total Organic Carbon	mg/L	0.7	2.6	NA
MBAS assay	mg/L	0.08	ND	NA
Phosphorus, Total	mg/L	0.05	ND	NA

Notes:

CaCO₃ = calcium carbonate

MBAS = methylene blue active substances

mg/L = milligrams per liter

NA = not applicable

ND = not detected

umhos/cm = micromhos/centimeter

6.3 Deionized Water Leachate Results

Table 6 presents the laboratory results of the deionized water leaching results from the composited pond and background samples. Use of deionized water to leach the soil samples generally mimics conditions that would occur if recharge of Colorado River Aqueduct water ceased and percolation through the soils occurred only by rainfall, or by water that had an appreciably lower TDS concentration than the Colorado River Aqueduct water. Thus, the deionized water leaching results provide an indication of whether a substantial quantity of salts or metals have built up in the soils beneath the replenishment ponds over time due to past and current operational practices.

Table 6. Deionized Water Leachate Results

	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
General Mineral Parameter									
Hardness, Total	mg/L	3	19	17	17	19	15	12	12
Calcium	mg/L	1	6.2	5.6	5.5	6	4.9	3.8	4.2
Magnesium	mg/L	1	ND	ND	ND	ND	ND	ND	ND
Sodium	mg/L	1	2	1.8	2.6	2.6	2.1	2	ND
Potassium	mg/L	1	1.9	1.8	1.6	2	1.7	1.5	1.8
Alkalinity, total	mg/L as CaCO ₃	5	23	23	26	25	23	18	15
Hydroxide	mg/L as CaCO ₃	5	ND	ND	ND	ND	ND	ND	ND
Carbonate	mg/L as CaCO ₃	5	ND	ND	ND	ND	ND	ND	ND
Bicarbonate	mg/L as CaCO ₃	5	23	23	26	25	23	18	15
Chloride	mg/L	1	ND	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	0.5	3.8	1.8	1.4	1.7	1.4	0.68	ND
Nitrate as N	mg/L	0.2	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	ND
pH	Std Units	1	7.6	7.6	7.5	7.6	7.6	7.6	7.5
Specific Conductance	umhos/cm	1	54	47	52	52	45	36	30
Total Dissolved Solids	mg/L	10	41	34	41	39	31	16	12
MBAS	mg/L	0.08	ND	ND	ND	ND	ND	ND	ND
Phosphorus, Total	mg/L	0.05	0.06	0.07	0.07	0.09	0.06	0.05	0.12

Table 6. Deionized Water Leachate Results									
	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
Metals									
Aluminum	ug/L	100	400	430	250	330	410	470	780
Antimony	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Arsenic	ug/L	5.0	ND	ND	5	ND	6.8	ND	ND
Barium	ug/L	20	ND	ND	ND	ND	ND	ND	ND
Beryllium	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Cadmium	ug/L	2.0	ND	ND	ND	ND	ND	ND	ND
Total Chromium	ug/L	20	ND	ND	ND	ND	ND	ND	ND
Cobalt	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Copper	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Iron	ug/L	50	ND	ND	ND	ND	ND	ND	ND
Lead	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Manganese	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Mercury	ug/L	0.20	ND	ND	ND	ND	ND	ND	ND
Molybdenum	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Nickel	ug/L	20	ND	ND	ND	ND	ND	ND	ND
Selenium	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND
Silver	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Thallium	ug/L	200	ND	ND	ND	ND	ND	ND	ND
Vanadium	ug/L	10	22	20	16	18	22	18	17
Zinc	ug/L	10	ND	ND	ND	ND	ND	ND	ND

Table 6. Deionized Water Leachate Results									
	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
Organics									
Total Organic Carbon	mg/L	0.70	ND	ND	ND	ND	ND	ND	ND
Petroleum Hydrocarbons									
Diesel Range Organics									
DRO (C10-C28)	mg/L	5	ND	ND	ND	ND	ND	ND	ND
ORO (C29-C44)	mg/L	5	ND	ND	ND	ND	ND	ND	ND
Gasoline Range Organics	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND

Notes:

CaCO₃ = calcium carbonate

DRO = diesel range organics

MBAS = methylene blue active substances

mg/L = milligrams per liter

NA = not applicable

ND = not detected

ORO = oil range organics

ug/L = micrograms per liter

umhos/cm = micromhos/centimeter

The deionized water leachate results from the pond and background composite samples are relatively consistent. All leachate samples are devoid of magnesium, chloride, and nitrate. The predominant components are calcium and bicarbonate. The pH values of 7.5 to 7.6 are very consistent across all samples. The total dissolved solids that leached from the soil samples range from 41 mg/L in the upstream Pond 1 sample to 16 mg/L in the downstream Pond 19 sample and 12 mg/L in the background sample. Overall, the data suggest that some salts and minerals have accumulated in the soils beneath the ponds, based on the slightly higher levels of hardness, calcium, sulfate, specific conductance, and TDS in the upstream Pond 1 sample compared to the downstream Pond 14 and 19 samples, as indicated in Table 6. The bicarbonate and TDS in the deionized water leaching sample from Pond 19 are slightly higher than those parameter concentrations in the background sample, but most other parameters are comparable in those two samples. The difference in TDS between the upstream and downstream samples is only 25 mg/L and between the upstream and background samples is only 29 mg/L. For comparison, the Colorado River Aqueduct water used for this study had a TDS concentration of 570 mg/L (see Section 6.2).

Additional evaluation of the general mineral parameters is based on graphical data presentation and interpretation methods such as Piper Diagrams and Stiff Diagrams. Piper Diagrams and Stiff Diagrams are common graphical tools used to present the general mineral chemistry of water samples. They are standard methods for interpretation of the chemical characteristics of water (Hem 1989). These graphical interpretation tools are based on the variations in the anions (negatively charged ions such as chloride, bicarbonate, and sulfate) and cations (positively charged ions such as calcium, magnesium, sodium and potassium) that make up the TDS in the water.

Figure 11 is a Piper Diagram based on the general mineral data for deionized water leaching results from Table 6. There is some minor diversity between the sample results, primarily based on variation in calcium vs sodium ratios and, to a lesser extent, bicarbonate vs sulfate ratios.

Stiff Diagrams show the variation in the “shape” of the deionized water leaching sample results from Table 6. The background soil composite sample is from outside of the replenishment ponds (Figure 8) and has not been in contact with Colorado River Aqueduct water. The mineral and salt signature imparted on the deionized water due to leaching of the background soil composite sample is predominantly calcium and bicarbonate, as indicated on Figure 12. There is no sulfate, chloride, or magnesium present in the leachate. Calcium makes up over 80 percent of the cations (positively charged ions) and sodium is less than 20 percent of the cations. Bicarbonate is the only anion (negatively charged ion) present in the leachate. However, it is important to note that the total dissolved solids level imparted on the leachate sample is only 12 mg/L. As noted above, the Colorado River Aqueduct water has a TDS of 570 mg/L.

Figure 13 is a compilation of the Stiff Diagrams for the deionized water leachate results for each of the pond composite soil samples (Table 6). Overall, the pond samples have slightly higher levels of sodium and sulfate compared to the background sample. Progressing “downstream” (i.e. from Pond 1 toward Pond 19), the proportion of the secondary cation, sodium, increases from about 30 percent to about 40 percent while the proportion of calcium decreases from 70 percent to 60 percent. For the anions, the change in the secondary ion (sulfate) is in the opposite direction, with the highest proportion of sulfate (about 20 percent) at Pond 1 and the proportion decreasing to about 5 percent downstream at Pond 19, with the bicarbonate percentage changing proportionately. Note, however, that in terms of actual concentrations, the percentage change represents a reduction in the calcium concentration from about 6

mg/L to about 4 mg/L and a change of the bicarbonate concentration from about 25 mg/L to 18 mg/L. Compared to the Colorado River Aqueduct water with a calcium concentration of 72 mg/L and a bicarbonate concentration of 140 mg/L (see Section 6.2), the changes in the proportions of the primary ions and secondary ions is nominal.

Table 6 also presents the metals results from the deionized water leaching of the composited soil samples. Only two metals are present in all the leaching samples, aluminum and vanadium. The concentration of aluminum in the background leachate sample is as much as three times higher than the aluminum concentration in the pond soils leachate samples. The vanadium concentration is comparable in all the leachate samples. The other metals that were consistently present in the solid samples (barium, chromium, cobalt, copper, iron, lead, manganese, nickel, and zinc – see Section 6.1) were not present in the deionized water leachate samples.

6.4 Colorado River Aqueduct Water Leachate Results

Table 7 presents the laboratory results of the Colorado River Aqueduct water leaching results from the composited pond and background samples. The Colorado River Aqueduct water leachate results from the pond and background composite samples are extremely consistent, with almost all parameter values being nearly identical to those shown in Table 5 for the Colorado River Aqueduct water sample. Unlike the deionized water leaching results, there is no perceptible difference between the upstream pond, downstream pond, and background sample data.

Table 7. Colorado River Aqueduct Water Leachate Results									
	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
General Mineral Parameter									
Hardness, Total	mg/L	6	280	280	280	280	280	270	280
Calcium	mg/L	1	73	72	72	73	71	70	75
Magnesium	mg/L	1	25	24	24	24	24	24	23
Sodium	mg/L	1	85	83	85	84	83	82	83
Potassium	mg/L	1	6.8	6.8	6.5	6.6	6.2	6.3	6.9
Alkalinity, total	mg/L as CaCO ₃	5	140	140	140	140	140	140	140
Hydroxide	mg/L as CaCO ₃	5	ND	ND	ND	ND	ND	ND	ND
Carbonate	mg/L as CaCO ₃	5	ND	ND	ND	ND	ND	ND	ND
Bicarbonate	mg/L as CaCO ₃	5	140	140	140	140	140	140	140
Chloride	mg/L	1	89	89	89	89	89	88	89
Sulfate	mg/L	0.5	210	210	210	210	210	210	210

Table 7. Colorado River Aqueduct Water Leachate Results

	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
Nitrate as N	mg/L	0.2	0.28	0.25	0.23	0.26	0.23	ND	0.21
Fluoride	mg/L	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4
pH	Std Units	1	8.3	8.3	8.2	8.2	8.3	8.3	8.3
Specific Conductance	umhos/cm	1	930	920	930	930	930	910	930
Total Dissolved Solids	mg/L	10	570	560	540	570	570	570	570
MBAS	mg/L	0.08	ND	ND	ND	ND	ND	ND	ND
Phosphorus, Total	mg/L	0.05	ND	ND	ND	ND	ND	ND	0.05
Metals									
Aluminum	ug/L	100	ND	ND	ND	ND	ND	ND	ND
Antimony	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Arsenic	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND
Barium	ug/L	20	69	73	72	69	85	75	69
Beryllium	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Cadmium	ug/L	2.0	ND	ND	ND	ND	ND	ND	ND
Total Chromium	ug/L	20	ND	ND	ND	ND	ND	ND	ND
Cobalt	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Copper	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Iron	ug/L	50	ND	ND	ND	ND	ND	ND	ND
Lead	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Manganese	ug/L	10	ND	ND	ND	ND	ND	19	17
Mercury	ug/L	0.20	ND	ND	ND	ND	ND	ND	ND
Molybdenum	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Nickel	ug/L	20	ND	ND	ND	ND	ND	ND	ND
Selenium	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND
Silver	ug/L	10	ND	ND	ND	ND	ND	ND	ND
Thallium	ug/L	200	ND	ND	ND	ND	ND	ND	ND
Vanadium	ug/L	10	21	23	21	27	26	26	24
Zinc	ug/L	10	ND	ND	ND	ND	ND	ND	ND

Table 7. Colorado River Aqueduct Water Leachate Results

	Units	Reporting Limit	Pond 1	Pond 2	Pond 5	Pond 12	Pond 14	Pond 19	Background
Organics									
Total Organic Carbon	mg/L	0.70	2.5	2.4	2.4	2.5	2.5	2.3	2.4
Petroleum Hydrocarbons									
Diesel Range Organics									
DRO (C10-C28)	mg/L	5	ND	ND	ND	ND	ND	ND	ND
ORO (C29-C44_)	mg/L	5	ND	ND	ND	ND	ND	ND	ND
Gasoline Range Organics	mg/L	0.05	ND	ND	ND	ND	ND	ND	ND

Notes:CaCO₃ = calcium carbonate

DRO = diesel range organics

MBAS = methylene blue active substances

mg/L = milligrams per liter

NA = not applicable

ND = not detected

ORO = oil range organics

ug/L = micrograms per liter

umhos/cm = micromhos/centimeter

Figure 14 presents the Piper Diagram of the general mineral data for Colorado River Aqueduct water leaching results. Due to the consistency of the results shown in Table 7, the leachate samples from each pond all plot in essentially the same position in all three areas of the Piper Diagram.

Figure 15 shows a Stiff Diagram of the Colorado River Aqueduct water based on the data presented in Table 5. Figure 16 is a compilation of the Stiff Diagrams for the Colorado River Aqueduct water leachate results for each of the pond composite soil samples. The Stiff Diagrams for the six soil composite leachate samples are identical to the Stiff Diagram for the Colorado River Aqueduct water, consistent with the data presented in Table 7. As discussed in Section 6.2, the primary mineral and salt constituents are calcium, sodium, bicarbonate, and sulfate.

The "shape" of the Colorado River Aqueduct water sample is identical to the shapes of the leachate samples from all six ponds, as shown on the Stiff Diagrams in Figures 15 and 16. The identical shapes of the Stiff Diagrams demonstrate that the Colorado River Aqueduct water has not left any significant dissolved solids behind on the soils and that the soils have not leached any significant quantity of minerals or salts into the water that percolates to the aquifer from the Facility.

Table 7 also presents the metals results from the Colorado River Aqueduct water leaching of the composited soil samples. Only two metals are present in all the leaching samples, barium and vanadium. The concentration of barium in the background leachate sample is equal to the low end of the range of the pond samples. The vanadium concentration is comparable in all the leachate samples. The other metals that were consistently present in the solid samples (aluminum, chromium, cobalt, copper, iron, lead, manganese, nickel, and zinc, see Section 6.1) were not present in the Colorado River Aqueduct water leachate samples.

Overall, the leachate data indicate that the Colorado River Aqueduct water has not left any significant dissolved solids behind on the soils and that the soils are not leaching any significant quantity of minerals, salts, or metals into the Colorado River Aqueduct water.

7.0 SUMMARY AND CONCLUSIONS

Composite soil samples were collected from six replenishment ponds and a background area at the Facility to obtain soil and sediment samples to evaluate whether constituents that could affect water quality are accumulating or leaching in the soils and sediments within the Whitewater Facility. Native soils were collected from the replenishment ponds at a depth of six feet below the ground surface within the ponds using an excavator. Native soils were collected from the background area at a depth of six inches below the ground surface using a hand trowel. Samples were delivered to the analytical laboratory under appropriate chain-of-custody protocol.

The solid samples were analyzed for metals, total organic carbon, petroleum hydrocarbons, grain size distribution, and CEC.

Splits of each composite sample were leached using deionized water and Colorado River Aqueduct water, using the WET test procedure. Leaching with deionized water was used to mimic the effect of percolation of rainfall or water with a substantially lower TDS than the Colorado River Aqueduct water. Leaching with Colorado River Aqueduct water was conducted to mimic existing operations at the Facility. The leachate samples were analyzed for general mineral and salt parameters, metals, total organic carbon, and petroleum hydrocarbons.

Within the solid samples, the predominant metals were aluminum and iron. Nine additional metals (barium, chromium, cobalt, copper, lead, manganese, nickel, vanadium, and zinc) were detected in all samples. Total organic carbon and petroleum hydrocarbons were not detected in any of the soil samples. Sieve analysis indicates that the soils are predominantly fine to medium-grained sands with very low silt and clay fractions. The CEC was very low, consistent with the grain size analysis. The CEC results suggest that there should not be a residual load of salts or metals in the soils that could leach over time or create a pulse if conditions changed at the Facility.

The deionized water leachate results indicate that some salts and minerals have accumulated in the soils beneath the ponds, based on the slightly higher levels of hardness, calcium, sulfate, specific conductance, and TDS in the upstream Pond 1 sample compared to the downstream Pond 14 and 19 samples. Only two metals are present in all the leaching samples, aluminum and vanadium. The other metals that were consistently present in the solid samples (barium, chromium, cobalt, copper, iron, lead, manganese, nickel, and zinc) were not present in the deionized water leachate samples.

Overall, the deionized water leaching data indicate that there may have been some very minor changes in the soil chemistry due to recharge over the past several decades at the Facility. However, these changes have not resulted in a significant build-up of salts or minerals in the soils associated with the replenishment ponds. For example, the difference in TDS between the upstream and downstream pond deionized water leachate samples is only 25 mg/L and between the upstream and background samples is only 29 mg/L. In comparison, the Colorado River Aqueduct water that percolates at the facility has a TDS concentration in the range of 570 mg/L. Thus, the TDS differences between the different leachate

samples are so small that they would have no measurable effect on the overall quality and chemistry of water that percolates to the groundwater aquifer if recharge of Colorado River Aqueduct water ceased and percolation through the soils occurred only by rainfall, or by water that had an appreciably lower TDS concentration than the Colorado River Aqueduct water. This finding is consistent with the low CEC values measured in the soil samples.

The Colorado River Aqueduct water leachate results from the pond and background composite samples are extremely consistent, with almost all parameter values being nearly identical to those measured in the Colorado River Aqueduct water sample. Unlike the deionized water leaching results, there is no perceptible difference between the upstream pond, downstream pond, and background sample data. Only two metals are present in all the leaching samples, barium and vanadium. The other metals that were consistently present in the solid samples (aluminum, chromium, cobalt, copper, iron, lead, manganese, nickel, and zinc) were not present in the Colorado River Aqueduct water leachate samples. Despite the elevated TDS of the Colorado River Aqueduct water, the low CEC values and lack of organic carbon in the soils preclude any ability to accumulate chemical constituents on the native soils beneath the facility, as evidenced by the consistency between the leaching results from the pond soil samples and the background sample.

Overall, the data obtained during this study demonstrate that the Colorado River Aqueduct water has not left any significant dissolved solids behind on the soils beneath the Facility and that the soils are not leaching any significant quantity of minerals, salts, or metals into the Colorado River Aqueduct water as it percolates to the underlying aquifer. These results indicate that changes to facility operations, such as a change in the amount of recharge or a change in the TDS level of the recharge water, would not result in the release of additional TDS to the groundwater, since there is no significant mass of salts, minerals, or metals being retained in the soils.

8.0 REFERENCES CITED

- ECORP Consulting, Inc. 2019. *Field Sampling & Testing Plan, Sediment Collection, Testing and Analysis, Whitewater River Groundwater Replenishment Facility Right of Way Grant Project Riverside County, California.*
- Hem, J.D., 1989. Study and Interpretation of the of the Chemical Characteristics of Natural Water, 3rd ed., U.S. Geological Survey Water-Supply Paper 2254.

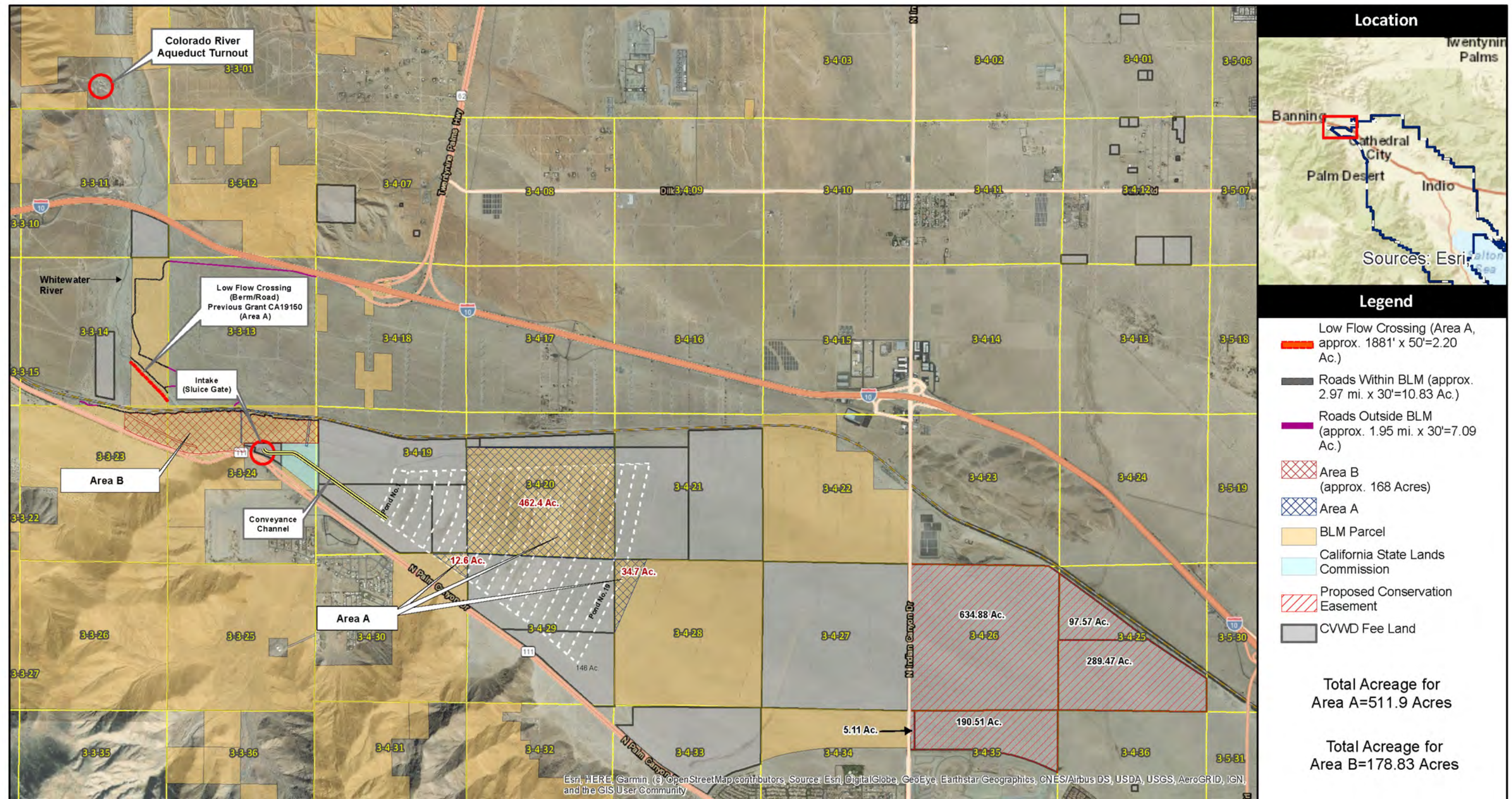
LIST OF APPENDICES

Appendix A - Figures

Appendix B - Field Photographs

Appendix C - Laboratory Analytical Data Sheets

Figures



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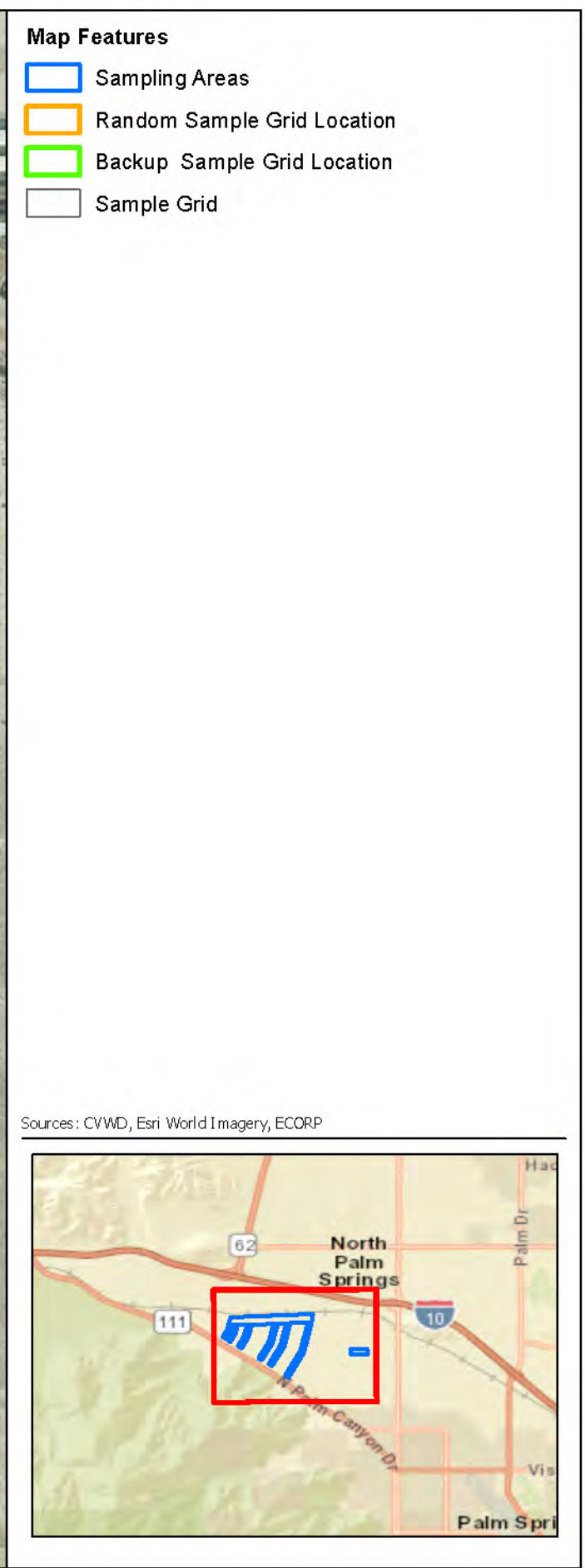


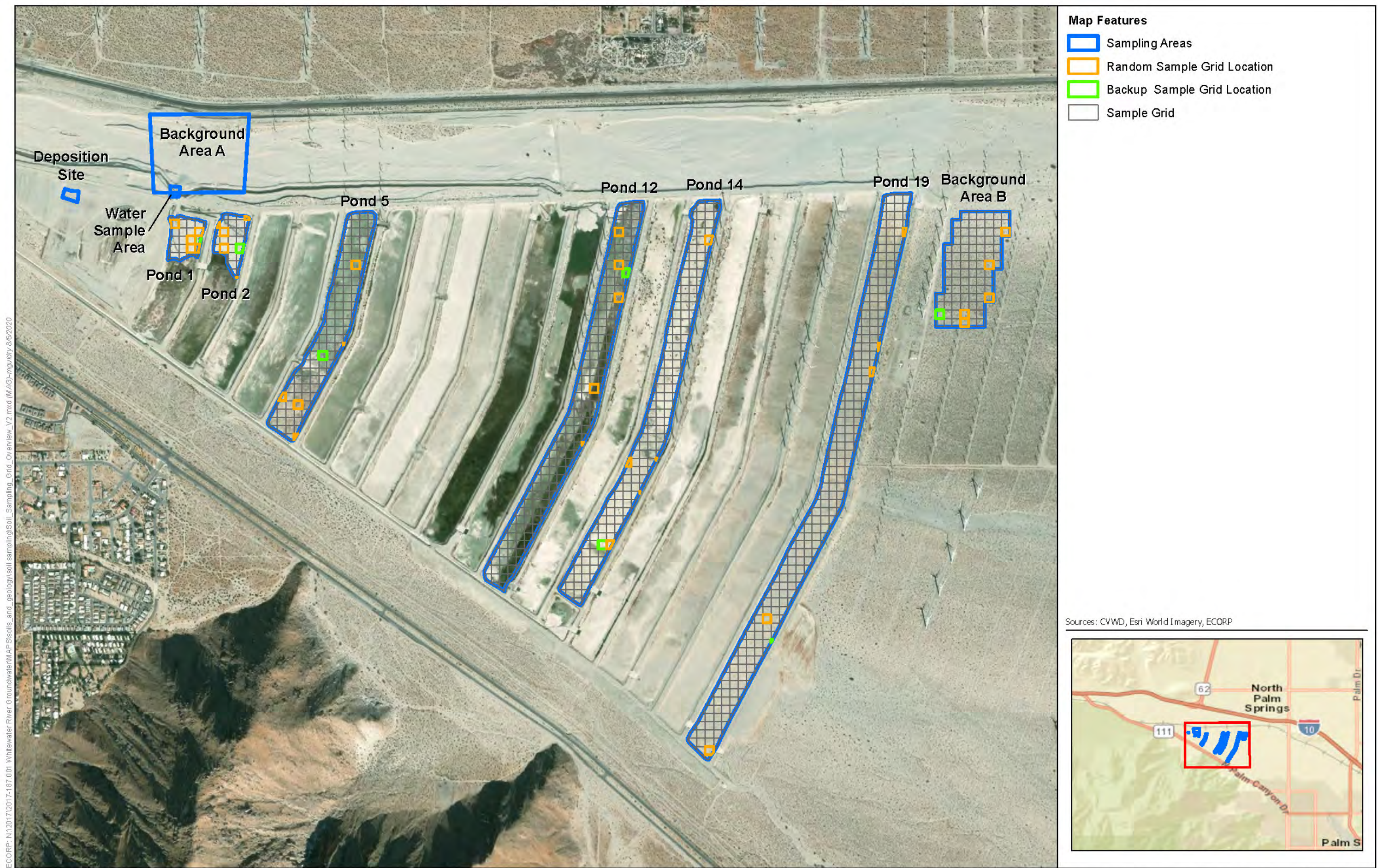
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Bureau of Land Management Right-Of-Way Grant for Whitewater River Groundwater Replenishment

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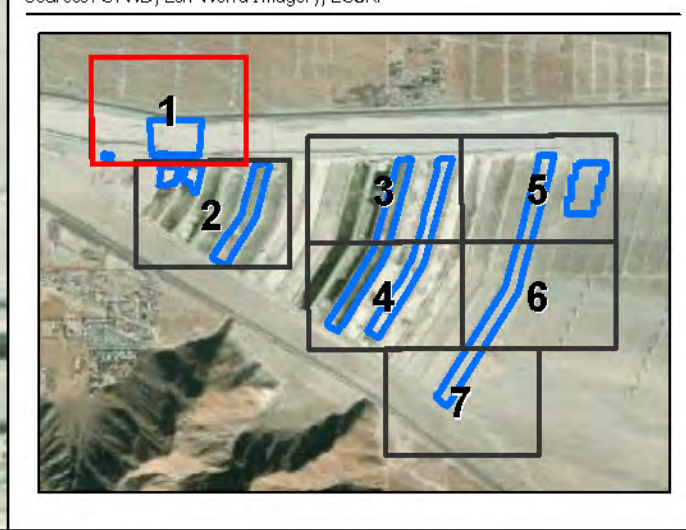
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Sources: CVWD, Esri World Imagery, ECRP



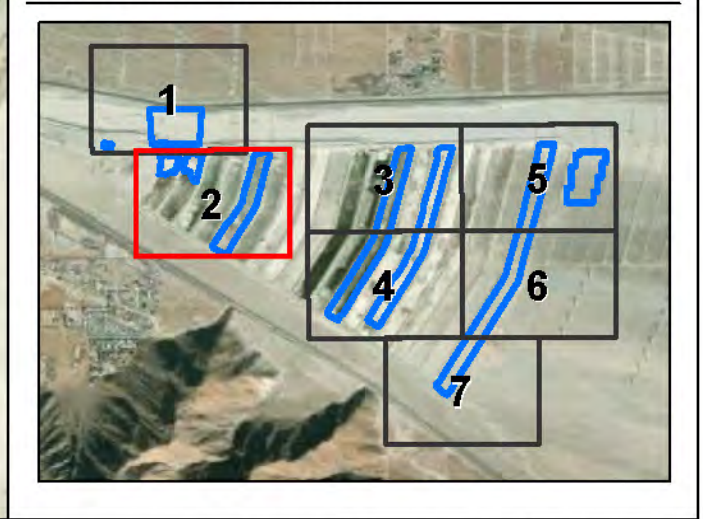
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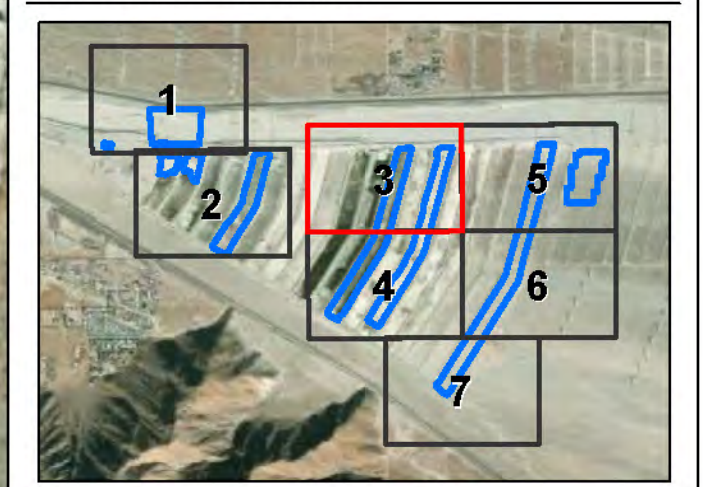
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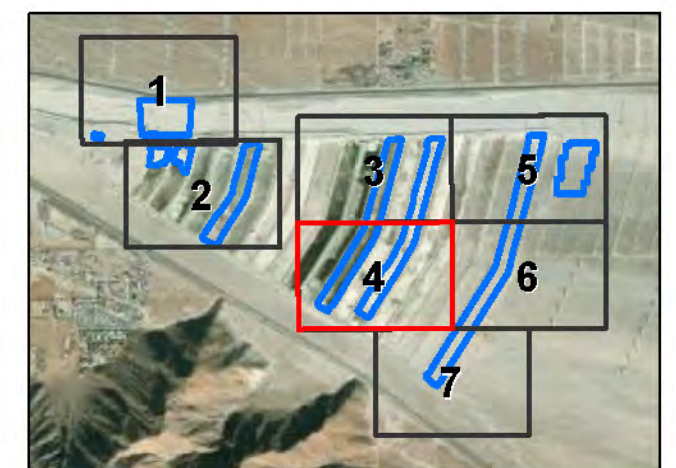
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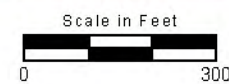
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Map Date: 7/26/2020

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Figure 7. Soil Sampling Grids Sheet 4 of 7

2017-187 Whitewater River Groundwater

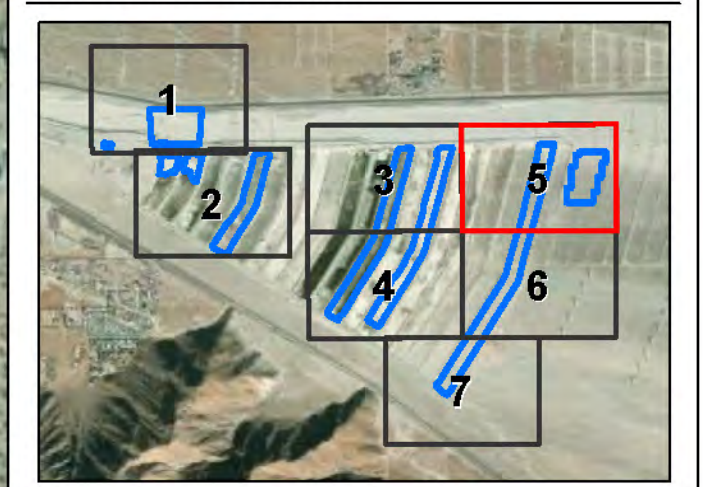
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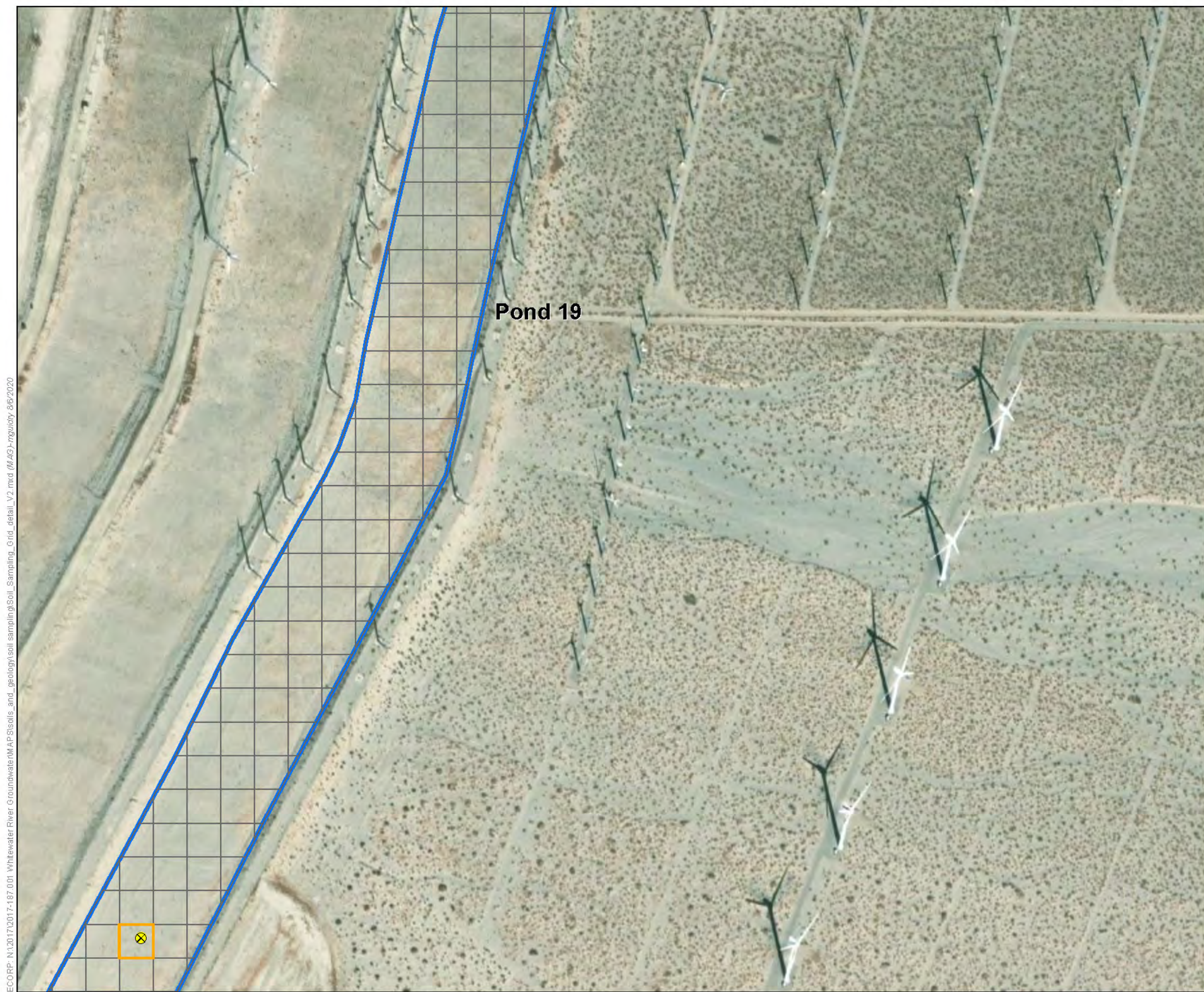
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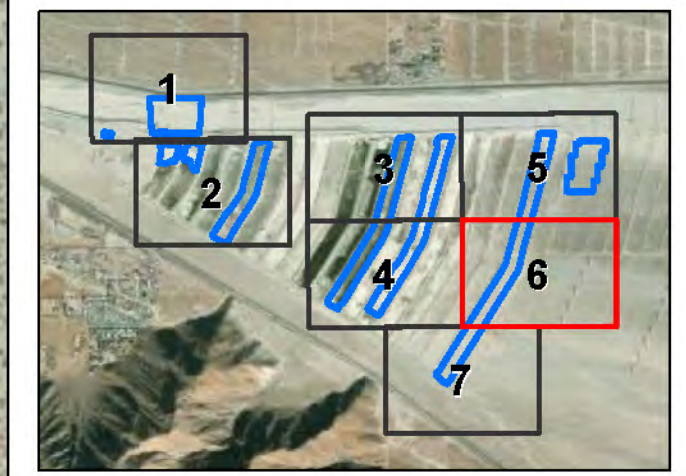
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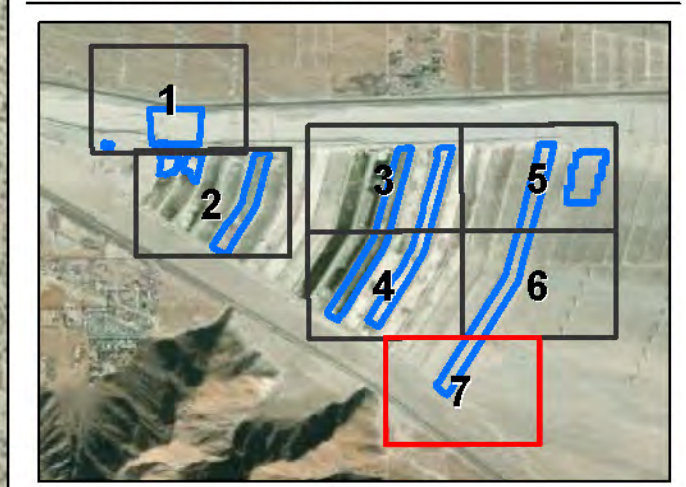
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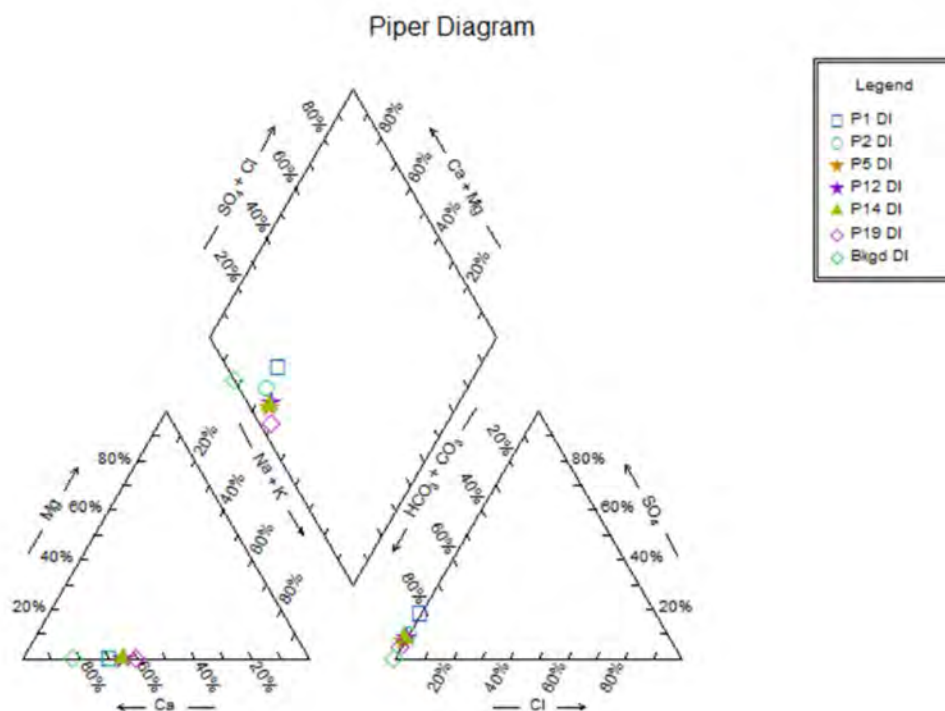


Figure 11. Piper Diagram of Deionized Water Leachate Samples

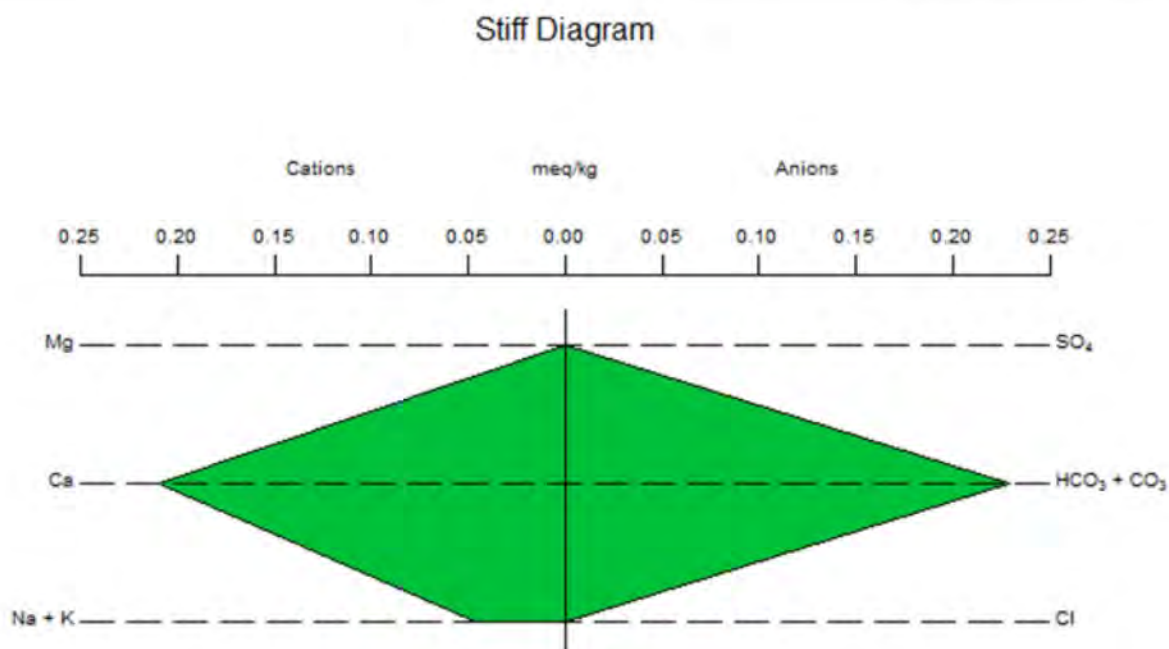


Figure 12. Stiff Diagram of Background Soil Sample Deionized Water Leachate Sample

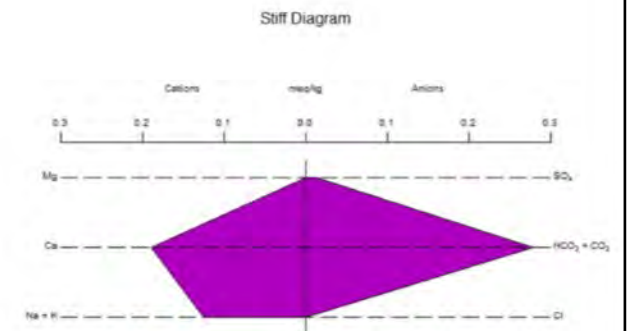
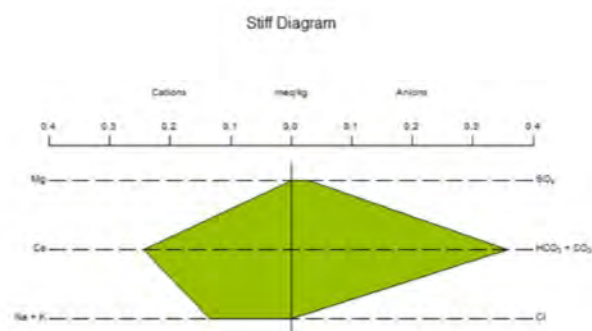
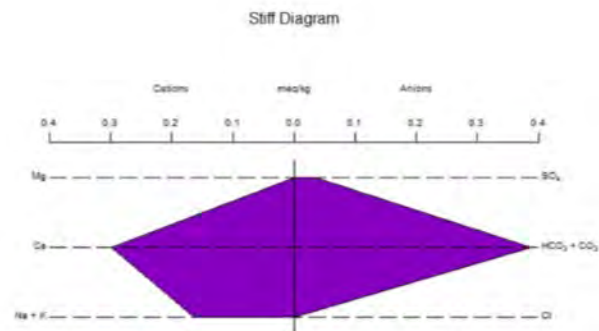
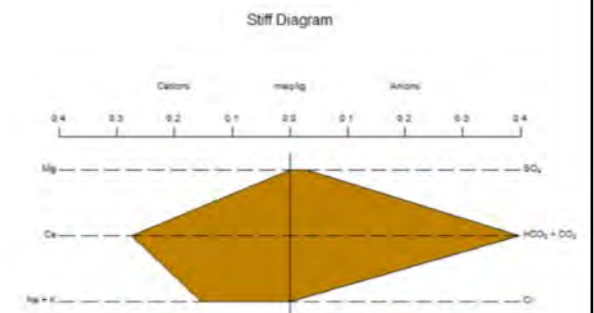
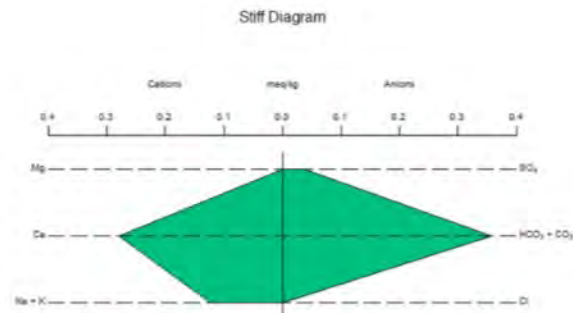
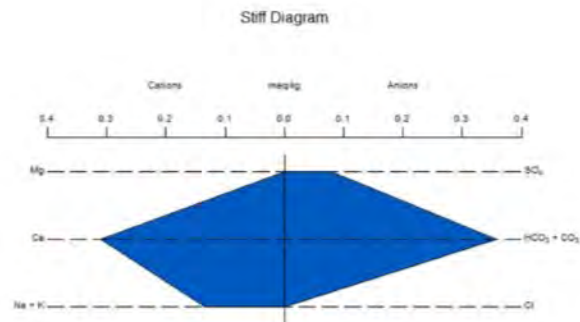


Figure 13. Stiff Plots of Deionized Water Leachate Samples

2017-187 Whitewater River Groundwater



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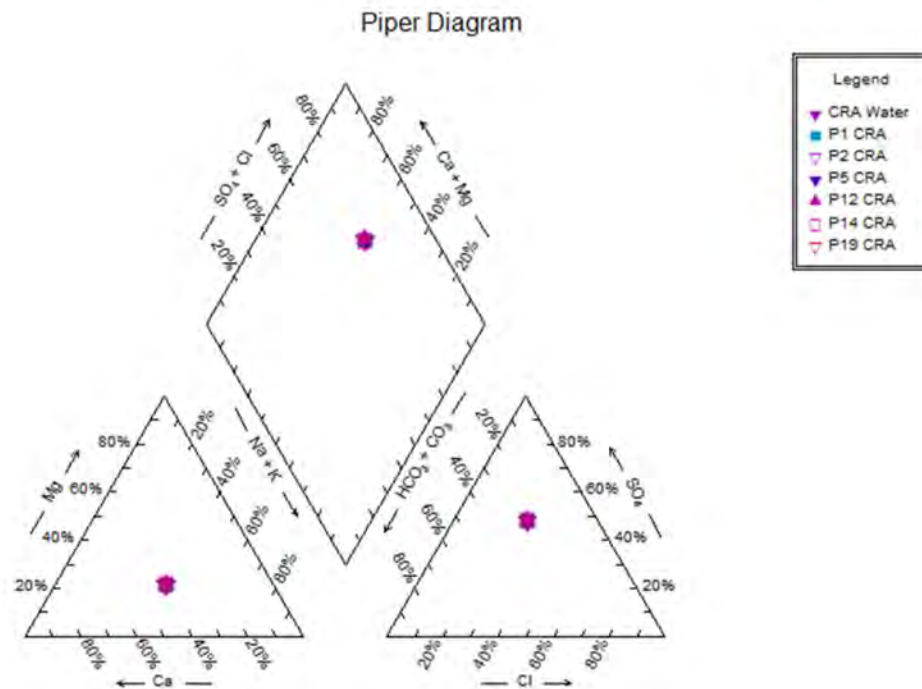


Figure 14. Piper Diagram of Colorado River Aqueduct Water Leachate Samples

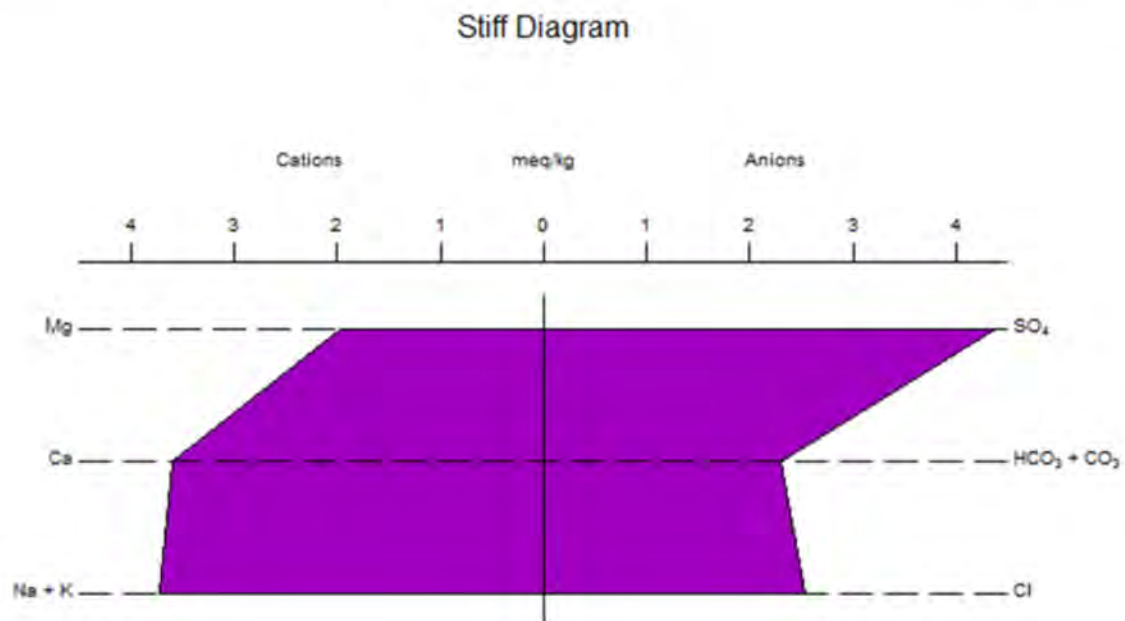


Figure 15. Stiff Diagram of Colorado River Aqueduct Water

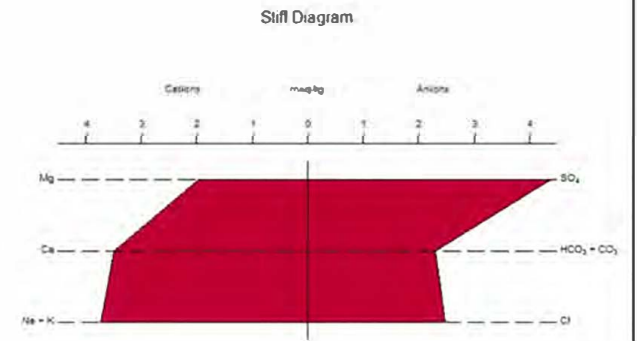
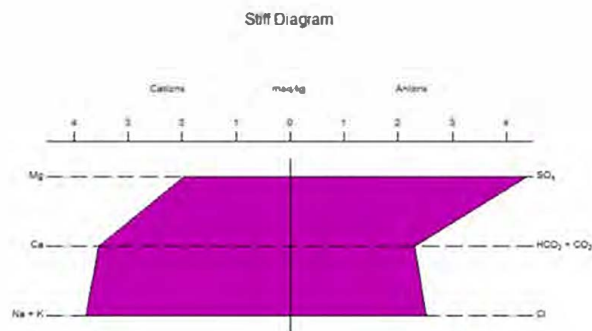
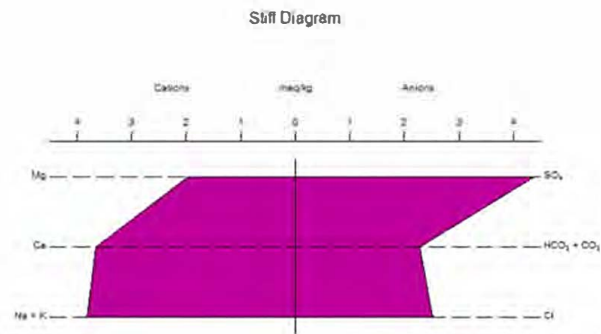
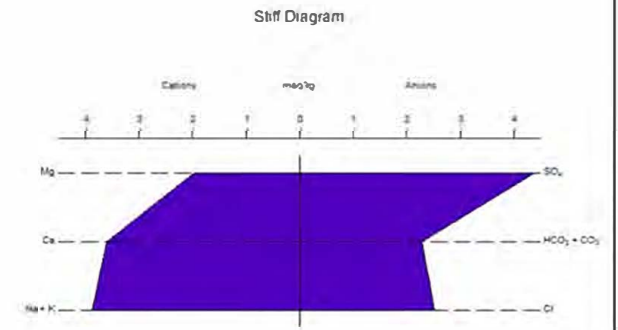
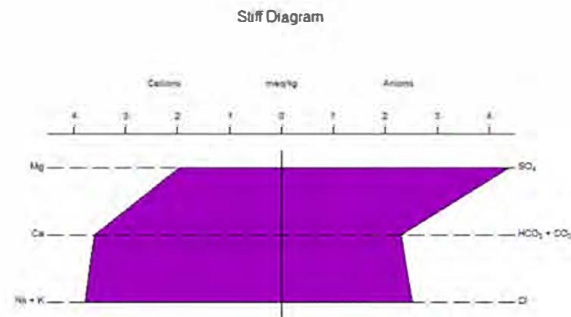
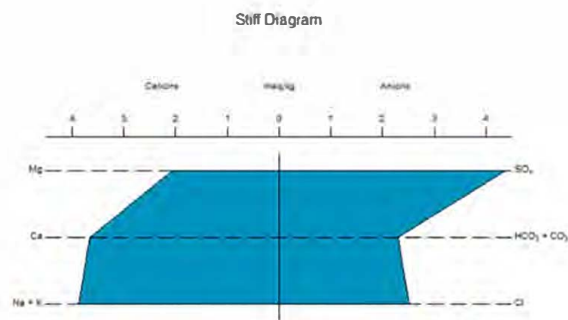


Figure 16. Stiff Diagrams of Colorado River Aqueduct Water Leachate Samples



APPENDIX B

Field Photographs



Photo 1. Background Area B, Site 20



Photo 2. Background Area B, Site 46



Photo 3. Background Area B, Site 72



Photo 4. Background Area B, Site 82



Photo 5. Background Area B, Site 87



Photo 6. Pond 1, Overview Facing Southwest, showing groomed and unsampleable area



Photo 7. Pond 1, Site 10



Photo 8. Pond 1, Site 15



Photo 9. Pond 1, Site 18



Photo 10. Pond 1, Site 25



Photo 11. Pond 1, Site 26



Photo 12. Pond 2, Site 4



Photo 13. Pond 2, Site 9



Photo 14. Pond 2, Site 11



Photo 15. Pond 2, Site 21



Photo 16. Pond 2, Site 34



Photo 17. Pond 5, Site 30



Photo 18. Pond 5, Site 81



Photo 19. Pond 5, Site 111



Photo 20. Pond 5, Site 118



Photo 21. Pond 5, Site 138



Photo 22. Pond 12, Site 18



Photo 23. Pond 12, Site 36



Photo 24. Pond 12, Site 55, Photo 1



Photo 25. Pond 12, Site 55, Photo 2



Photo 26. Pond 12, Site 101



Photo 27. Pond 12, Site 138, Photo 1



Photo 28. Pond 12, Site 138, Photo 2



Photo 29. Pond 14, Site 20



Photo 30. Pond 14, Site 133



Photo 31. Pond 14, Site 137



Photo 32. Pond 14, Site 157



Photo 33. Pond 14, Site 188



Photo 34. Pond 19, Site 22



Photo 35. Pond 19, Site 85



Photo 36. Pond 19, Site 101



Photo 37. Pond 19, Site 244



Photo 38. Pond 19, Site 329, Photo 1



Photo 39. Pond 19, Site 329, Photo 2



Photo 40. Sediment Placement Area, Sediment Piles Facing Southwest



Photo 41. Upstream Control Area A, Sample 1



Photo 42. Upstream Control Area A, Sample 2



Photo 43. Upstream Control Area A, Sample 3



Photo 44. Upstream Control Area A, Sample 4



Photo 45. Upstream Control Area A, Sample 5

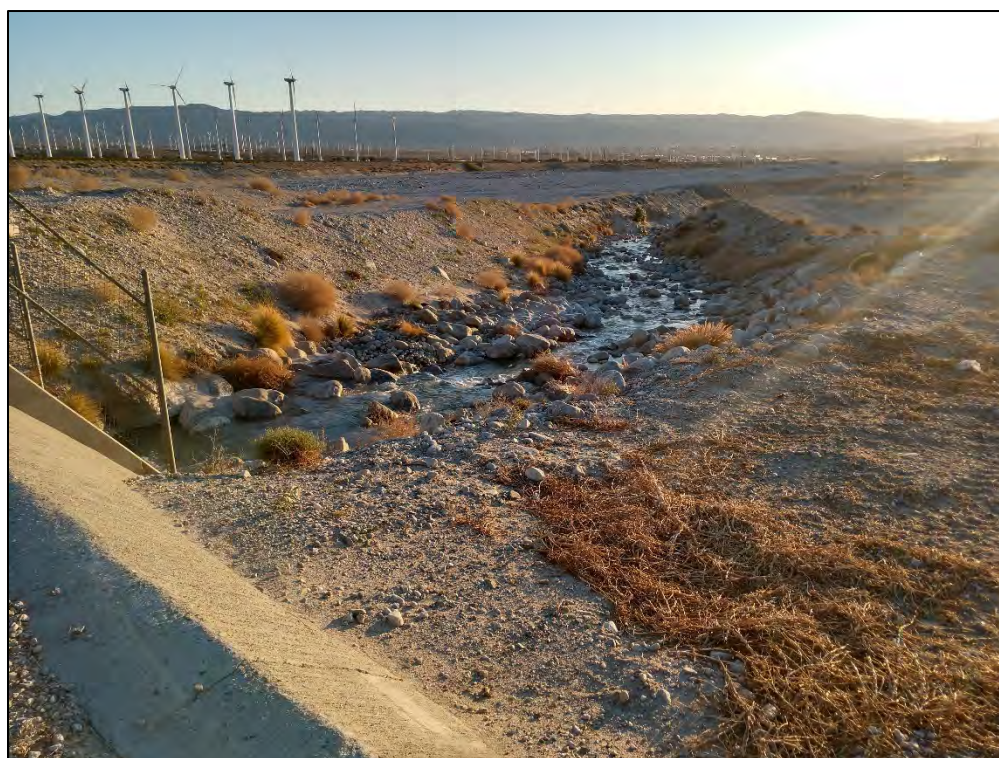


Photo 46. Whitewater Wash, Downstream of Pond 1 Diversion Facing North

Laboratory Analytical Data Sheets



BABCOCK Laboratories, Inc.
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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 1 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: C0C0769
Received on Ice (Y/N): Yes Temp: 16 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
C0C0769-01	Whitewater Creek	Liquid	03/4/20 12:25	Todd Chapman	03/04/20 17:15	Todd Chapman



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Client Name: ECORP Consulting, Inc.
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Santa Ana, CA 92705

Analytical Report: Page 2 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: **C0C0769**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0C0769-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Whitewater Creek	Liquid	03/04/20 12:25	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	180	15	mg/L	SM 2340B/EPA 200.7	03/11/20 19:10	KRV	
Calcium	50	2.5	mg/L	EPA 200.7	03/11/20 19:10	MEL	
Magnesium	13	2.5	mg/L	EPA 200.7	03/11/20 19:10	MEL	
Anions							
Total Alkalinity	160	5.0	mg/L as CaCO ₃	SM 2320B	03/14/20 02:55	CMR	
Hydroxide	ND	5.0	mg/L as CaCO ₃	SM 2320B	03/14/20 02:55	CMR	
Carbonate	ND	5.0	mg/L as CaCO ₃	SM 2320B	03/14/20 02:55	CMR	
Bicarbonate	160	5.0	mg/L as CaCO ₃	SM 2320B	03/14/20 02:55	CMR	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	03/13/20 11:24	KBS	
Specific Conductance	380	1.0	umhos/cm	SM 2510 B	03/14/20 02:55	CMR	
Solids							
Total Dissolved Solids	220	10	mg/L	SM 2540C	03/06/20 18:15	KAA	

Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 3 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: C0C0769
Received on Ice (Y/N): Yes Temp: 16 °C

Cations - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0C11108 - EPA 200.2										
Blank (0C11108-BLK1)				Prepared & Analyzed: 03/11/20						
Calcium	ND	1.0	mg/L							
Magnesium	ND	1.0	mg/L							
LCS (0C11108-BS1)				Prepared & Analyzed: 03/11/20						
Calcium	17.7	1.0	mg/L	17.0		104	85-115			
Magnesium	17.1	1.0	mg/L	17.0		101	85-115			
Matrix Spike (0C11108-MS1)				Source: C0C0585-01 Prepared & Analyzed: 03/11/20						
Calcium	69.8	2.0	mg/L	17.0	51.3	108	70-130			
Magnesium	33.2	2.0	mg/L	17.0	14.8	109	70-130			
Matrix Spike Dup (0C11108-MSD1)				Source: C0C0585-01 Prepared & Analyzed: 03/11/20						
Calcium	69.6	2.0	mg/L	17.0	51.3	107	70-130	0.262	20	
Magnesium	32.6	2.0	mg/L	17.0	14.8	105	70-130	1.91	20	



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Analytical Report: Page 4 of 8
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: **C0C0769**
 Received on Ice (Y/N): Yes Temp: 16 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0C13075 - Analyzed as received										
Blank (0C13075-BLK1)				Prepared & Analyzed: 03/14/20						
Total Alkalinity	ND	5.0	mg/L as CaCO ₃							
Hydroxide	ND	5.0	mg/L as CaCO ₃							
Carbonate	ND	5.0	mg/L as CaCO ₃							
Bicarbonate	ND	5.0	mg/L as CaCO ₃							
LCS (0C13075-BS2)				Prepared & Analyzed: 03/14/20						
Total Alkalinity	1230	5.0	mg/L as CaCO ₃	1250		98.4	90-110			
Carbonate	1210	5.0	mg/L as CaCO ₃	1250		96.5	90-110			
Duplicate (0C13075-DUP1)				Source: C0C0565-03		Prepared & Analyzed: 03/14/20				
Total Alkalinity	136	5.0	mg/L as CaCO ₃		134			1.44	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	136	5.0	mg/L as CaCO ₃		134			1.44	20	
Duplicate (0C13075-DUP2)				Source: C0C0565-05		Prepared & Analyzed: 03/14/20				
Total Alkalinity	146	5.0	mg/L as CaCO ₃		147			0.320	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	146	5.0	mg/L as CaCO ₃		147			0.320	20	



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Analytical Report: Page 5 of 8
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: C0C0769
 Received on Ice (Y/N): Yes Temp: 16 °C

Aggregate Properties - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0C13022 - Analyzed as received										
LCS (0C13022-BS1)				Prepared & Analyzed: 03/13/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
LCS (0C13022-BS2)				Prepared & Analyzed: 03/13/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
LCS (0C13022-BS3)				Prepared & Analyzed: 03/13/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
LCS (0C13022-BS4)				Prepared & Analyzed: 03/13/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
Duplicate (0C13022-DUP1)		Source: C0C0668-01		Prepared & Analyzed: 03/13/20						
pH	7.6	1.0	pH Units		7.6			0.792	5	
Duplicate (0C13022-DUP2)		Source: C0C0769-01		Prepared & Analyzed: 03/13/20						
pH	8.3	1.0	pH Units		8.3			0.242	5	
Batch 0C13075 - Analyzed as received										
LCS (0C13075-BS1)				Prepared & Analyzed: 03/14/20						
Specific Conductance	976	1.0	umhos/cm	1000		97.6	90-110			
Duplicate (0C13075-DUP1)		Source: C0C0565-03		Prepared & Analyzed: 03/14/20						
Specific Conductance	1060	1.0	umhos/cm		1070			0.942	20	
Duplicate (0C13075-DUP2)		Source: C0C0565-05		Prepared & Analyzed: 03/14/20						
Specific Conductance	1030	1.0	umhos/cm		1040			1.16	20	



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Santa Ana, CA 92705

Analytical Report: Page 6 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: **C0C0769**
Received on Ice (Y/N): Yes Temp: 16 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0C06057 - Analyzed as received										
Blank (0C06057-BLK1)				Prepared & Analyzed: 03/06/20						
Total Dissolved Solids	ND	10	mg/L							
Duplicate (0C06057-DUP1)				Source: C0C0706-07 Prepared & Analyzed: 03/06/20						
Total Dissolved Solids	317	10	mg/L		317			0.00	20	
Duplicate (0C06057-DUP2)				Source: C0C0758-01 Prepared & Analyzed: 03/06/20						
Total Dissolved Solids	361	10	mg/L		349			3.38	20	

Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 7 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 19-Mar-2020

Work Order Number: C0C0769
Received on Ice (Y/N): Yes Temp: 16 °C

Notes and Definitions

pH: Regulatory 15 minute holding time exceeded C0C0769-01

ND: Analyte NOT DETECTED at or above the Method Detection Limit (**if MDL is reported**), otherwise at or above the Reportable Detection Limit (RDL)

NR: Not Reported

RDL: Reportable Detection Limit

MDL: Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.



Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

This report applies only to the sample(s) analyzed. As a mutual protection to clients, the public, and Babcock Laboratories, Inc., this report is submitted and accepted for the exclusive use of the Client to whom it is addressed. Interpretation and use of the information contained within this report are the sole responsibility of the Client. Babcock Laboratories, Inc. is not responsible for any misinformation or consequences that may result from misinterpretation or improper use of this report. This report is not to be modified or abbreviated in any way. Additionally, this report is not to be used, in whole or in part, in any advertising or publicity matter without written authorization from Babcock Laboratories, Inc. The liability of Babcock Laboratories, Inc. is limited to the actual cost of the requested analyses, unless otherwise agreed upon in writing. There is no other warranty expressed or implied.

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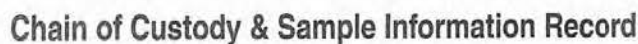
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EPA No. CA00102
NELAP No. OR4035
LACSD No. 10119



Analytical Report: Page 8 of 8
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Work Order Number: C0C0769
Received on Ice (Y/N): Yes Temp: 16 °C



Rc'd: 03/04/2020 17:15
JLH

Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 1 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
C0D3709-01	Pond 1 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-02	Pond 1 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-03	Pond 2 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-04	Pond 2 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-05	Pond 5 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-06	Pond 5 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-07	Pond 12 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-08	Pond 12 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-09	Pond 14 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-10	Pond 14 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-11	Pond 19 (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-12	Pond 19 (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-13	Background (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-14	Background (Leachate w/ DI)	Liquid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman
C0D3709-17	Sediment Placement (Solid)	Solid	03/3/20 0:00	Todd Chapman	03/04/20 17:15	Todd Chapman



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Client Name: ECORP Consulting, Inc.
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Santa Ana, CA 92705

Analytical Report: Page 2 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Note: Sample identified as Upstream Wash, C0D3709-15 and C0D3709-16 was cancelled, sample was not received at laboratory.



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 Santa Ana, CA 92705

Analytical Report: Page 3 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	05/14/20 11:05	KSL	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	8700	10	mg/kg	EPA 6010B	05/12/20 16:25	MEL	
Antimony	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Arsenic	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Barium	45	1.0	mg/kg	EPA 6020	05/14/20 21:05	KRV	
Beryllium	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Cadmium	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Total Chromium	9.5	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Cobalt	3.8	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Copper	5.9	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Iron	15000	20	mg/kg	EPA 6010B	05/12/20 16:25	MEL	
Lead	2.0	2.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Manganese	180	10	mg/kg	EPA 6020	05/14/20 21:05	KRV	
Mercury	ND	0.050	mg/kg	EPA 7471A	05/12/20 12:53	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Nickel	5.5	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Selenium	ND	5.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Silver	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Thallium	ND	1.0	mg/kg	EPA 6020	05/12/20 14:15	KRV	
Vanadium	17	1.0	mg/kg	EPA 6020	05/14/20 21:05	KRV	
Zinc	30	1.0	mg/kg	EPA 6020	05/14/20 21:05	KRV	NRPDo
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/08/20 23:18	NAA	N_HTp
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/08/20 23:18	NAA	N_HTp
Surrogate: o-Terphenyl	70%	10-142		EPA 8015B	05/08/20 23:18	NAA	N_HTp
Surrogate: n-Triacontane	36%	10-118		EPA 8015B	05/08/20 23:18	NAA	N_HTp



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Analytical Report: Page 4 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/05/20 15:30	ABUSE	N_HTp
Surrogate: <i>a,a,a</i> -Trifluorotoluene	100%	11-140		EPA 8015B	05/05/20 15:30	ABUSE	N_HTp



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 5 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	19	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:26	KSL	
Calcium	6.2	1.0	mg/L	EPA 200.7	05/29/20 15:26	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:26	KSL	
Sodium	2.0	1.0	mg/L	EPA 200.7	05/29/20 15:26	KSL	
Potassium	1.9	1.0	mg/L	EPA 200.7	05/29/20 15:26	KSL	
Anions							
Total Alkalinity	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:43	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:43	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:43	BBR	
Bicarbonate	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:43	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 02:48	KAA	
Sulfate	3.8	0.50	mg/L	EPA 300.0	05/29/20 02:48	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 02:48	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.6	1.0	pH Units	SM 4500H+ B	05/29/20 13:43	BBR	
Specific Conductance	54	1.0	umhos/cm	SM 2510 B	05/29/20 13:43	BBR	
Solids							
Total Dissolved Solids	41	10	mg/L	SM 2540C	05/28/20 21:00	JGZ	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 12:14	KSL	N_HTa

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 NELAP No. OR4035
 LACSD No. 10119



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 Contact: Todd Chapman
 Address: 2861 Pullman Street
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Analytical Report: Page 6 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/28/20 20:10	DAD	
Nutrients							
Total Phosphorus	0.06	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	400	100	ug/L	EPA 200.7	05/29/20 15:26	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:26	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:29	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:29	KRV	
Vanadium	22	10	ug/L	EPA 200.8	06/02/20 14:24	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:29	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 7 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:09	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:09	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 18:09	NAA	N_HTr
Surrogate: n-Triacontane	41%	10-122		EPA 8015B	05/29/20 18:09	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 17:35	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	94%	64-120		EPA 8015B	05/29/20 17:35	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 8 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	06/02/20 11:01	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	6900	10	mg/kg	EPA 6010B	06/01/20 17:55	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Arsenic	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Barium	42	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Total Chromium	8.6	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Cobalt	3.9	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Copper	6.3	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Iron	13000	20	mg/kg	EPA 6010B	06/01/20 17:55	KSL	
Lead	2.2	2.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Manganese	190	10	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 12:58	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Nickel	5.6	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Vanadium	20	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Zinc	29	1.0	mg/kg	EPA 6020	06/01/20 17:24	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 16:39	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 16:39	NAA	N_HTr
Surrogate: o-Terphenyl	52%	10-142		EPA 8015B	05/26/20 16:39	NAA	N_HTr
Surrogate: n-Triacontane	27%	10-118		EPA 8015B	05/26/20 16:39	NAA	N_HTr



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Analytical Report: Page 9 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 16:17	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	90%	11-140		EPA 8015B	05/28/20 16:17	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 10 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	17	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:28	KSL	
Calcium	5.6	1.0	mg/L	EPA 200.7	05/29/20 15:28	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:28	KSL	
Sodium	1.8	1.0	mg/L	EPA 200.7	05/29/20 15:28	KSL	
Potassium	1.8	1.0	mg/L	EPA 200.7	05/29/20 15:28	KSL	
Anions							
Total Alkalinity	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:50	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:50	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:50	BBR	
Bicarbonate	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:50	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 03:02	KAA	
Sulfate	1.8	0.50	mg/L	EPA 300.0	05/29/20 03:02	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 03:02	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.6	1.0	pH Units	SM 4500H+ B	05/29/20 13:50	BBR	
Specific Conductance	47	1.0	umhos/cm	SM 2510 B	05/29/20 13:50	BBR	
Solids							
Total Dissolved Solids	34	10	mg/L	SM 2540C	05/28/20 21:00	JGZ	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 12:29	KSL	N_HTa

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 LACSD No. 10119



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 11 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/28/20 20:10	DAD	
Nutrients							
Total Phosphorus	0.07	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	430	100	ug/L	EPA 200.7	05/29/20 15:28	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:28	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:32	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:32	KRV	
Vanadium	20	10	ug/L	EPA 200.8	06/02/20 14:26	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:32	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:34	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:34	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 18:34	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 18:34	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 18:12	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	83%	64-120		EPA 8015B	05/29/20 18:12	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
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Analytical Report: Page 13 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	06/02/20 11:16	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	7400	10	mg/kg	EPA 6010B	06/01/20 17:57	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Arsenic	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Barium	40	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Total Chromium	8.3	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Cobalt	3.5	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Copper	8.2	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Iron	13000	20	mg/kg	EPA 6010B	06/01/20 17:57	KSL	
Lead	4.4	2.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Manganese	180	10	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:01	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Nickel	5.5	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Vanadium	20	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Zinc	28	1.0	mg/kg	EPA 6020	06/01/20 17:35	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 17:03	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 17:03	NAA	N_HTr
Surrogate: o-Terphenyl	64%	10-142		EPA 8015B	05/26/20 17:03	NAA	N_HTr
Surrogate: n-Triacontane	33%	10-118		EPA 8015B	05/26/20 17:03	NAA	N_HTr



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Client Name: ECORP Consulting, Inc.
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Address: 2861 Pullman Street
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Analytical Report: Page 14 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 16:53	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	94%	11-140		EPA 8015B	05/28/20 16:53	JES	N_HTr



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Analytical Report: Page 15 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	17	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:29	KSL	
Calcium	5.5	1.0	mg/L	EPA 200.7	05/29/20 15:29	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:29	KSL	
Sodium	2.6	1.0	mg/L	EPA 200.7	05/29/20 15:29	KSL	
Potassium	1.6	1.0	mg/L	EPA 200.7	05/29/20 15:29	KSL	
Anions							
Total Alkalinity	26	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:57	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:57	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:57	BBR	
Bicarbonate	26	5.0	mg/L as CaCO3	SM 2320B	05/29/20 13:57	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 03:16	KAA	
Sulfate	1.4	0.50	mg/L	EPA 300.0	05/29/20 03:16	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 03:16	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.5	1.0	pH Units	SM 4500H+ B	05/29/20 13:57	BBR	
Specific Conductance	52	1.0	umhos/cm	SM 2510 B	05/29/20 13:57	BBR	
Solids							
Total Dissolved Solids	41	10	mg/L	SM 2540C	05/28/20 21:00	JGZ	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 12:43	KSL	N_HTa



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Analytical Report: Page 16 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/28/20 20:10	DAD	
Nutrients							
Total Phosphorus	0.07	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	250	100	ug/L	EPA 200.7	05/29/20 15:29	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Arsenic	5.0	5.0	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:29	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:34	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:34	KRV	
Vanadium	16	10	ug/L	EPA 200.8	06/02/20 14:29	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:34	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
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Analytical Report: Page 17 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	06/01/20 13:57	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	06/01/20 13:57	NAA	N_HTr
Surrogate: o-Terphenyl	82%	49-114		EPA 8015B	06/01/20 13:57	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	06/01/20 13:57	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 16:47	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	91%	64-120		EPA 8015B	06/01/20 16:47	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 18 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	06/02/20 11:28	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	8100	10	mg/kg	EPA 6010B	06/01/20 17:59	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Arsenic	1.1	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Barium	47	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Total Chromium	13	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Cobalt	4.5	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Copper	9.0	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Iron	14000	20	mg/kg	EPA 6010B	06/01/20 17:59	KSL	
Lead	2.7	2.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Manganese	240	10	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:03	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Nickel	6.8	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Vanadium	25	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Zinc	36	1.0	mg/kg	EPA 6020	06/01/20 17:37	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 17:28	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 17:28	NAA	N_HTr
Surrogate: o-Terphenyl	63%	10-142		EPA 8015B	05/26/20 17:28	NAA	N_HTr
Surrogate: n-Triacontane	33%	10-118		EPA 8015B	05/26/20 17:28	NAA	N_HTr



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Client Name: ECORP Consulting, Inc.
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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 17:30	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	89%	11-140		EPA 8015B	05/28/20 17:30	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-08

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	19	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:31	KSL	
Calcium	6.0	1.0	mg/L	EPA 200.7	05/29/20 15:31	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:31	KSL	
Sodium	2.6	1.0	mg/L	EPA 200.7	05/29/20 15:31	KSL	
Potassium	2.0	1.0	mg/L	EPA 200.7	05/29/20 15:31	KSL	
Anions							
Total Alkalinity	25	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:05	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:05	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:05	BBR	
Bicarbonate	25	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:05	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 03:29	KAA	
Sulfate	1.7	0.50	mg/L	EPA 300.0	05/29/20 03:29	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 03:29	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.6	1.0	pH Units	SM 4500H+ B	05/29/20 14:05	BBR	
Specific Conductance	52	1.0	umhos/cm	SM 2510 B	05/29/20 14:05	BBR	
Solids							
Total Dissolved Solids	39	10	mg/L	SM 2540C	05/28/20 21:00	JGZ	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 12:58	KSL	N_HTa



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-08

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/28/20 20:10	DAD	
Nutrients							
Total Phosphorus	0.09	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	330	100	ug/L	EPA 200.7	05/29/20 15:31	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:31	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8	05/29/20 15:36	KRV	N_HTa
				ATP			
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:36	KRV	
Vanadium	18	10	ug/L	EPA 200.8	06/02/20 14:31	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:36	KRV	



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Client Name: ECORP Consulting, Inc.
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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-08

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:58	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 18:58	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 18:58	NAA	N_HTr
Surrogate: n-Triacontane	41%	10-122		EPA 8015B	05/29/20 18:58	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 18:48	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	95%	64-120		EPA 8015B	05/29/20 18:48	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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Analytical Report: Page 23 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	06/02/20 11:45	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	7000	10	mg/kg	EPA 6010B	06/01/20 18:01	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Arsenic	1.1	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Barium	44	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Total Chromium	7.1	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Cobalt	3.7	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Copper	6.9	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Iron	13000	20	mg/kg	EPA 6010B	06/01/20 18:01	KSL	
Lead	2.2	2.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Manganese	180	10	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:05	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Nickel	4.8	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Vanadium	19	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Zinc	28	1.0	mg/kg	EPA 6020	06/01/20 17:40	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 17:53	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 17:53	NAA	N_HTr
Surrogate: o-Terphenyl	65%	10-142		EPA 8015B	05/26/20 17:53	NAA	N_HTr
Surrogate: n-Triacontane	34%	10-118		EPA 8015B	05/26/20 17:53	NAA	N_HTr



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Analytical Report: Page 24 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 18:07	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	97%	11-140		EPA 8015B	05/28/20 18:07	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 25 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-10

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	15	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:33	KSL	
Calcium	4.9	1.0	mg/L	EPA 200.7	05/29/20 15:33	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:33	KSL	
Sodium	2.1	1.0	mg/L	EPA 200.7	05/29/20 15:33	KSL	
Potassium	1.7	1.0	mg/L	EPA 200.7	05/29/20 15:33	KSL	
Anions							
Total Alkalinity	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:13	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:13	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:13	BBR	
Bicarbonate	23	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:13	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 02:55	KAA	
Sulfate	1.4	0.50	mg/L	EPA 300.0	05/29/20 02:55	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 02:55	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.6	1.0	pH Units	SM 4500H+ B	05/29/20 14:13	BBR	
Specific Conductance	45	1.0	umhos/cm	SM 2510 B	05/29/20 14:13	BBR	
Solids							
Total Dissolved Solids	31	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 13:12	KSL	N_HTa

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Analytical Report: Page 26 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-10

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	0.06	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	410	100	ug/L	EPA 200.7	05/29/20 15:33	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Arsenic	6.8	5.0	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:33	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8	05/29/20 15:39	KRV	N_HTa
				ATP			
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:39	KRV	
Vanadium	22	10	ug/L	EPA 200.8	06/02/20 14:33	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:39	KRV	



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-10

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 19:23	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 19:23	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 19:23	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 19:23	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 19:27	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	87%	64-120		EPA 8015B	05/29/20 19:27	JES	N_HTr



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-11

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.20	%	EPA 9060	06/02/20 11:53	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	8000	10	mg/kg	EPA 6010B	06/01/20 18:03	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Arsenic	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Barium	48	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Total Chromium	9.6	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Cobalt	4.1	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Copper	8.4	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Iron	14000	20	mg/kg	EPA 6010B	06/01/20 18:03	KSL	
Lead	2.3	2.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Manganese	210	10	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:08	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Nickel	5.7	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Vanadium	22	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Zinc	34	1.0	mg/kg	EPA 6020	06/01/20 17:42	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 18:17	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 18:17	NAA	N_HTr
Surrogate: o-Terphenyl	63%	10-142		EPA 8015B	05/26/20 18:17	NAA	N_HTr
Surrogate: n-Triacontane	33%	10-118		EPA 8015B	05/26/20 18:17	NAA	N_HTr



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-11

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 18:44	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	84%	11-140		EPA 8015B	05/28/20 18:44	JES	N_HTr



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-12

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	12	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:35	KSL	
Calcium	3.8	1.0	mg/L	EPA 200.7	05/29/20 15:35	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:35	KSL	
Sodium	2.0	1.0	mg/L	EPA 200.7	05/29/20 15:35	KSL	
Potassium	1.5	1.0	mg/L	EPA 200.7	05/29/20 15:35	KSL	
Anions							
Total Alkalinity	18	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:22	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:22	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:22	BBR	
Bicarbonate	18	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:22	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 03:30	KAA	
Sulfate	0.68	0.50	mg/L	EPA 300.0	05/29/20 03:30	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 03:30	KAA	
Fluoride	0.1	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.6	1.0	pH Units	SM 4500H+ B	05/29/20 14:22	BBR	
Specific Conductance	36	1.0	umhos/cm	SM 2510 B	05/29/20 14:22	BBR	
Solids							
Total Dissolved Solids	16	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 13:54	KSL	N_HTa



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-12

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	0.05	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	470	100	ug/L	EPA 200.7	05/29/20 15:35	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:35	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:41	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:41	KRV	
Vanadium	18	10	ug/L	EPA 200.8	06/02/20 14:48	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:41	KRV	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-12

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 19:48	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 19:48	NAA	N_HTr
Surrogate: o-Terphenyl	78%	49-114		EPA 8015B	05/29/20 19:48	NAA	N_HTr
Surrogate: n-Triacontane	39%	10-122		EPA 8015B	05/29/20 19:48	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 20:03	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	92%	64-120		EPA 8015B	05/29/20 20:03	JES	N_HTr



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Contact: Todd Chapman
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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-13

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.20	%	EPA 9060	06/02/20 12:01	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	7100	10	mg/kg	EPA 6010B	06/01/20 18:06	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Arsenic	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Barium	44	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Total Chromium	9.2	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Cobalt	4.3	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Copper	8.2	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Iron	14000	20	mg/kg	EPA 6010B	06/01/20 18:06	KSL	
Lead	2.2	2.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Manganese	180	10	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:15	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Nickel	5.6	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Vanadium	23	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Zinc	32	1.0	mg/kg	EPA 6020	06/01/20 17:44	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 18:42	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 18:42	NAA	N_HTr
Surrogate: o-Terphenyl	66%	10-142		EPA 8015B	05/26/20 18:42	NAA	N_HTr
Surrogate: n-Triacontane	34%	10-118		EPA 8015B	05/26/20 18:42	NAA	N_HTr



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-13

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 19:21	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	108%	11-140		EPA 8015B	05/28/20 19:21	JES	N_HTr



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-14

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	12	3.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:37	KSL	
Calcium	4.2	1.0	mg/L	EPA 200.7	05/29/20 15:37	KSL	
Magnesium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:37	KSL	
Sodium	ND	1.0	mg/L	EPA 200.7	05/29/20 15:37	KSL	
Potassium	1.8	1.0	mg/L	EPA 200.7	05/29/20 15:37	KSL	
Anions							
Total Alkalinity	15	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:31	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:31	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:31	BBR	
Bicarbonate	15	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:31	BBR	
Chloride	ND	1.0	mg/L	EPA 300.0	05/29/20 03:42	KAA	
Sulfate	ND	0.50	mg/L	EPA 300.0	05/29/20 03:42	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 03:42	KAA	
Fluoride	ND	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	7.5	1.0	pH Units	SM 4500H+ B	05/29/20 14:31	BBR	
Specific Conductance	30	1.0	umhos/cm	SM 2510 B	05/29/20 14:31	BBR	
Solids							
Total Dissolved Solids	12	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.70	mg/L	SM 5310B	05/29/20 14:11	KSL	N_HTa

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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-14

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	0.12	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	780	100	ug/L	EPA 200.7	05/29/20 15:37	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Barium	ND	20	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:37	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:43	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:43	KRV	
Vanadium	17	10	ug/L	EPA 200.8	06/02/20 14:50	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:43	KRV	



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Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-14

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ DI)	Liquid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 20:13	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 20:13	NAA	N_HTr
Surrogate: o-Terphenyl	79%	49-114		EPA 8015B	05/29/20 20:13	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 20:13	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 20:42	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	86%	64-120		EPA 8015B	05/29/20 20:42	JES	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-17

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Sediment Placement (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Aggregate Organic Compounds							
Total Organic Carbon	ND	0.19	%	EPA 9060	06/02/20 12:25	DNF	N_HTa
Metals and Metalloids; EPA SW846 Series							
Aluminum	6400	10	mg/kg	EPA 6010B	06/01/20 18:08	KSL	
Antimony	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Arsenic	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Barium	44	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Beryllium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Cadmium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Total Chromium	8.3	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Cobalt	3.7	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Copper	6.7	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Iron	11000	20	mg/kg	EPA 6010B	06/01/20 18:08	KSL	
Lead	ND	2.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Manganese	180	10	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Mercury	ND	0.050	mg/kg	EPA 7471A	06/02/20 13:18	KSL	N_HTa
Molybdenum	ND	5.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Nickel	5.2	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Selenium	ND	5.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Silver	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Thallium	ND	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Vanadium	20	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Zinc	34	1.0	mg/kg	EPA 6020	06/01/20 17:46	MEL	
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	10	mg/kg	EPA 8015B	05/26/20 19:07	NAA	N_HTr
ORO (C29-C44)	ND	10	mg/kg	EPA 8015B	05/26/20 19:07	NAA	N_HTr
Surrogate: o-Terphenyl	69%	10-142		EPA 8015B	05/26/20 19:07	NAA	N_HTr
Surrogate: n-Triacontane	36%	10-118		EPA 8015B	05/26/20 19:07	NAA	N_HTr



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Laboratory Reference Number

C0D3709-17

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Sediment Placement (Solid)	Solid	03/03/20 00:00	03/04/20 17:15

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	5.0	mg/kg	EPA 8015B	05/28/20 19:57	JES	N_HTr
Surrogate: <i>a,a,a</i> -Trifluorotoluene	103%	11-140		EPA 8015B	05/28/20 19:57	JES	N_HTr



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Cations - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK1)				Prepared & Analyzed: 05/29/20						
Calcium	ND	1.0	mg/L							
Magnesium	ND	1.0	mg/L							
Sodium	ND	1.0	mg/L							
Potassium	ND	1.0	mg/L							
Blank (0E29050-BLK2)				Prepared & Analyzed: 05/29/20						
Calcium	ND	1.0	mg/L							
Magnesium	ND	1.0	mg/L							
Sodium	ND	1.0	mg/L							
Potassium	ND	1.0	mg/L							
LCS (0E29050-BS1)				Prepared & Analyzed: 05/29/20						
Calcium	17.5	1.0	mg/L	17.0		103	85-115			
Magnesium	17.0	1.0	mg/L	17.0		100	85-115			
Sodium	33.3	1.0	mg/L	33.7		99	85-115			
Potassium	16.9	1.0	mg/L	17.0		99	85-115			
Matrix Spike (0E29050-MS1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Calcium	23.8	1.0	mg/L	17.0	5.48	108	70-130			
Magnesium	18.1	1.0	mg/L	17.0	0.878	101	70-130			
Sodium	36.4	1.0	mg/L	33.7	2.56	100	70-130			
Potassium	18.9	1.0	mg/L	17.0	1.61	102	70-130			
Matrix Spike Dup (0E29050-MSD1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Calcium	23.0	1.0	mg/L	17.0	5.48	103	70-130	3	20	
Magnesium	17.6	1.0	mg/L	17.0	0.878	98	70-130	3	20	
Sodium	35.4	1.0	mg/L	33.7	2.56	97	70-130	3	20	
Potassium	18.3	1.0	mg/L	17.0	1.61	98	70-130	3	20	



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Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E28116 - Analyzed as Received IC										
Blank (0E28116-BLK1)				Prepared & Analyzed: 05/29/20						
Sulfate	ND	0.50	mg/L							
Chloride	ND	1.0	mg/L							
Nitrate as N	ND	0.20	mg/L							
LCS (0E28116-BS1)				Prepared & Analyzed: 05/29/20						
Sulfate	25.3	0.50	mg/L	25.0		101	90-110			
Chloride	25.8	1.0	mg/L	25.0		103	90-110			
Nitrate as N	5.20	0.20	mg/L	5.65		92	90-110			
Matrix Spike (0E28116-MS1)				Source: C0E3239-15 Prepared & Analyzed: 05/29/20						
Sulfate	44.8	0.50	mg/L	25.0	18.1	107	75-128			
Chloride	47.4	1.0	mg/L	25.0	21.0	106	84-129			
Nitrate as N	5.18	0.20	mg/L	5.65	ND	92	75-131			
Matrix Spike (0E28116-MS2)				Source: C0E3180-01 Prepared & Analyzed: 05/29/20						
Sulfate	293	0.50	mg/L	25.0	269	97	75-128			QOcal
Chloride	128	1.0	mg/L	25.0	102	102	84-129			
Nitrate as N	8.27	0.20	mg/L	5.65	2.48	102	75-131			
Matrix Spike Dup (0E28116-MSD1)				Source: C0E3239-15 Prepared & Analyzed: 05/29/20						
Sulfate	44.9	0.50	mg/L	25.0	18.1	107	75-128	0.3	20	
Chloride	47.5	1.0	mg/L	25.0	21.0	106	84-129	0.3	20	
Nitrate as N	5.18	0.20	mg/L	5.65	ND	92	75-131	0.1	20	
Batch 0E28127 - Analyzed as Received IC										
Blank (0E28127-BLK1)				Prepared & Analyzed: 05/29/20						
Sulfate	ND	0.50	mg/L							
Chloride	ND	1.0	mg/L							
Nitrate as N	ND	0.20	mg/L							



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E28127 - Analyzed as Received IC										
LCS (0E28127-BS1)				Prepared & Analyzed: 05/29/20						
Sulfate	25.3	0.50	mg/L	25.0		101	90-110			
Chloride	26.4	1.0	mg/L	25.0		105	90-110			
Nitrate as N	5.71	0.20	mg/L	5.65		101	90-110			
Matrix Spike (0E28127-MS1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
Sulfate	24.8	0.50	mg/L	25.0	ND	99	75-128			
Chloride	25.4	1.0	mg/L	25.0	ND	101	84-129			
Nitrate as N	5.53	0.20	mg/L	5.65	ND	98	75-131			
Matrix Spike (0E28127-MS2)				Source: C0E1012-07 Prepared & Analyzed: 05/29/20						
Sulfate	236	0.50	mg/L	25.0	212	97	75-128			
Chloride	115	1.0	mg/L	25.0	89.1	102	84-129			
Nitrate as N	5.94	0.20	mg/L	5.65	0.206	101	75-131			
Matrix Spike Dup (0E28127-MSD1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
Sulfate	24.7	0.50	mg/L	25.0	ND	99	75-128	0.2	20	
Chloride	25.3	1.0	mg/L	25.0	ND	101	84-129	0.2	20	
Nitrate as N	5.54	0.20	mg/L	5.65	ND	98	75-131	0.09	20	
Batch 0E29016 - Analyzed as received										
Blank (0E29016-BLK1)				Prepared & Analyzed: 05/29/20						
Total Alkalinity	ND	5.0	mg/L as CaCO3							
Hydroxide	ND	5.0	mg/L as CaCO3							
Carbonate	ND	5.0	mg/L as CaCO3							
Bicarbonate	ND	5.0	mg/L as CaCO3							



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29016 - Analyzed as received										
LCS (0E29016-BS3)				Prepared & Analyzed: 05/29/20						
Total Alkalinity	1280	5.0	mg/L as CaCO ₃	1250		102	90-110			
Carbonate	1250	5.0	mg/L as CaCO ₃	1250		100	90-110			
Duplicate (0E29016-DUP1)				Source: C0E1012-03 Prepared & Analyzed: 05/29/20						
Total Alkalinity	137	5.0	mg/L as CaCO ₃		139			1	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	135	5.0	mg/L as CaCO ₃		139			3	20	
Duplicate (0E29016-DUP2)				Source: C0E1012-04 Prepared & Analyzed: 05/29/20						
Total Alkalinity	136	5.0	mg/L as CaCO ₃		137			0.4	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	136	5.0	mg/L as CaCO ₃		137			0.4	20	
Batch 0F01102 - Analyzed as received										
Blank (0F01102-BLK1)				Prepared & Analyzed: 06/01/20						
Fluoride	ND	0.1	mg/L							
LCS (0F01102-BS1)				Prepared & Analyzed: 06/01/20						
Fluoride	0.788	0.1	mg/L	0.800		98	90-110			
LCS (0F01102-BS2)				Prepared & Analyzed: 06/01/20						
Fluoride	0.763	0.1	mg/L	0.800		95	90-110			
LCS (0F01102-BS3)				Prepared & Analyzed: 06/01/20						
Fluoride	0.754	0.1	mg/L	0.800		94	90-110			



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Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01102 - Analyzed as received										
LCS (0F01102-BS4)				Prepared & Analyzed: 06/01/20						
Fluoride	0.763	0.1	mg/L	0.800		95	90-110			
Matrix Spike (0F01102-MS1)				Source: C0E3251-01 Prepared & Analyzed: 06/01/20						
Fluoride	0.485	0.1	mg/L	0.400	0.104	95	75-125			
Matrix Spike Dup (0F01102-MSD1)				Source: C0E3251-01 Prepared & Analyzed: 06/01/20						
Fluoride	0.489	0.1	mg/L	0.400	0.104	96	75-125	0.8	20	



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Aggregate Properties - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29016 - Analyzed as received										
LCS (0E29016-BS1)				Prepared & Analyzed: 05/29/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
LCS (0E29016-BS2)				Prepared & Analyzed: 05/29/20						
Specific Conductance	992	1.0	umhos/cm	1000		99	90-110			
Duplicate (0E29016-DUP1)				Source: C0E1012-03		Prepared & Analyzed: 05/29/20				
pH	8.3	1.0	pH Units		8.2			1	5	
Specific Conductance	945	1.0	umhos/cm		932			1	20	
Duplicate (0E29016-DUP2)				Source: C0E1012-04		Prepared & Analyzed: 05/29/20				
pH	8.3	1.0	pH Units		8.2			0.7	5	
Specific Conductance	917	1.0	umhos/cm		928			1	20	



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E28118 - Analyzed as received										
Blank (0E28118-BLK1)				Prepared & Analyzed: 05/28/20						
Total Dissolved Solids	ND	10	mg/L							
Duplicate (0E28118-DUP1)				Source: C0E3030-04 Prepared & Analyzed: 05/28/20						
Total Dissolved Solids	371	10	mg/L		388			4	20	
Duplicate (0E28118-DUP2)				Source: C0E3030-05 Prepared & Analyzed: 05/28/20						
Total Dissolved Solids	405	10	mg/L		408			0.7	20	
Batch 0F01104 - Analyzed as received										
Blank (0F01104-BLK1)				Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	ND	10	mg/L							
Duplicate (0F01104-DUP1)				Source: C0E3044-01 Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	1400	20	mg/L		1400			0	20	
Duplicate (0F01104-DUP2)				Source: C0E3405-01 Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	323	10	mg/L		331			2	20	



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 Received on Ice (Y/N): Yes Temp: 16 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E11115 - As recieved										
Blank (0E11115-BLK1)				Prepared & Analyzed: 05/14/20						
Total Organic Carbon	ND	0.20	%							
LCS (0E11115-BS1)				Prepared & Analyzed: 05/14/20						
Total Organic Carbon	1.62	0.20	%	1.59		102	70-130			
Matrix Spike (0E11115-MS1)				Source: C0D3709-01 Prepared & Analyzed: 05/14/20						
Total Organic Carbon	1.26	0.19	%	1.50	ND	84	41-139			
Matrix Spike Dup (0E11115-MSD1)				Source: C0D3709-01 Prepared & Analyzed: 05/14/20						
Total Organic Carbon	1.23	0.19	%	1.50	ND	82	41-139	3	25	
Batch 0E29036 - As recieved										
Blank (0E29036-BLK1)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	ND	0.70	mg/L							
Blank (0E29036-BLK2)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	ND	0.70	mg/L							
LCS (0E29036-BS1)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	3.92	0.70	mg/L	4.00		98	90-110			
Duplicate (0E29036-DUP1)				Source: C0E1012-06 Prepared & Analyzed: 05/29/20						
Total Organic Carbon	2.32	0.70	mg/L		2.29			1	20	
Matrix Spike (0E29036-MS1)				Source: C0E1012-07 Prepared & Analyzed: 05/29/20						
Total Organic Carbon	6.52	0.70	mg/L	4.00	2.42	103	80-120			



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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29036 - As recieved										
Matrix Spike Dup (0E29036-MSD1)		Source: C0E1012-07			Prepared & Analyzed: 05/29/20					
Total Organic Carbon	6.55	0.70	mg/L	4.00	2.42	103	80-120	0.4	10	
Batch 0E29057 - As recieved										
Blank (0E29057-BLK1)		Prepared & Analyzed: 06/02/20								
Total Organic Carbon	ND	0.20	%							
LCS (0E29057-BS1)		Prepared & Analyzed: 06/02/20								
Total Organic Carbon	1.52	0.20	%	1.58		98	70-130			
Matrix Spike (0E29057-MS1)		Source: C0D3709-03			Prepared & Analyzed: 06/02/20					
Total Organic Carbon	1.57	0.19	%	1.47	ND	106	41-139			
Matrix Spike Dup (0E29057-MSD1)		Source: C0D3709-03			Prepared & Analyzed: 06/02/20					
Total Organic Carbon	1.02	0.19	%	1.47	ND	69	41-139	42	25	QMS(D)



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Surfactants - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E27133 - Solvent Extraction.										
Blank (0E27133-BLK1)				Prepared & Analyzed: 05/27/20						
MBAS	ND	0.08	mg/L							
LCS (0E27133-BS1)				Prepared & Analyzed: 05/27/20						
MBAS	0.249	0.08	mg/L	0.400		62	26-137			
Matrix Spike (0E27133-MS1)				Source: C0E3058-01 Prepared & Analyzed: 05/27/20						
MBAS	0.359	0.20	mg/L	0.500	ND	72	19-140			
Matrix Spike Dup (0E27133-MSD1)				Source: C0E3058-01 Prepared & Analyzed: 05/27/20						
MBAS	0.303	0.20	mg/L	0.500	ND	61	19-140	17	30	
Batch 0E29012 - Solvent Extraction.										
Blank (0E29012-BLK1)				Prepared & Analyzed: 05/29/20						
MBAS	ND	0.08	mg/L							
LCS (0E29012-BS1)				Prepared & Analyzed: 05/29/20						
MBAS	0.180	0.08	mg/L	0.400		45	26-137			
Matrix Spike (0E29012-MS1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
MBAS	0.270	0.20	mg/L	0.500	ND	54	19-140			
Matrix Spike Dup (0E29012-MSD1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
MBAS	0.219	0.20	mg/L	0.500	ND	44	19-140	21	30	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Nutrients - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29025 - Acid Digest										
LCS (0E29025-BS1)				Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.536	0.05	mg/L	0.500		107	85-115			
Matrix Spike (0E29025-MS1)				Source: C0E2358-04 Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.571	0.05	mg/L	0.500	0.0546	103	80-120			
Matrix Spike Dup (0E29025-MSD1)				Source: C0E2358-04 Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.565	0.05	mg/L	0.500	0.0546	102	80-120	1	20	



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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29031 - EPA 200.2										
Blank (0E29031-BLK1)				Prepared & Analyzed: 05/29/20						
Antimony	ND	10	ug/L							
Arsenic	ND	5.0	ug/L							
Barium	ND	20	ug/L							
Beryllium	ND	10	ug/L							
Cadmium	ND	2.0	ug/L							
Total Chromium	ND	20	ug/L							
Cobalt	ND	10	ug/L							
Copper	ND	10	ug/L							
Lead	ND	10	ug/L							
Manganese	ND	10	ug/L							
Mercury	ND	0.20	ug/L							
Molybdenum	ND	10	ug/L							
Nickel	ND	20	ug/L							
Selenium	ND	5.0	ug/L							
Silver	ND	10	ug/L							
Thallium	ND	200	ug/L							
Zinc	ND	10	ug/L							
Blank (0E29031-BLK2)				Prepared & Analyzed: 05/29/20						
Antimony	ND	10	ug/L							
Arsenic	ND	5.0	ug/L							
Barium	ND	20	ug/L							
Beryllium	ND	10	ug/L							
Cadmium	ND	2.0	ug/L							
Total Chromium	ND	20	ug/L							
Cobalt	ND	10	ug/L							
Copper	ND	10	ug/L							
Lead	ND	10	ug/L							
Manganese	ND	10	ug/L							
Mercury	ND	0.20	ug/L							
Molybdenum	ND	10	ug/L							
Nickel	ND	20	ug/L							
Selenium	ND	5.0	ug/L							
Silver	ND	10	ug/L							
Thallium	ND	200	ug/L							

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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29031 - EPA 200.2										
Blank (0E29031-BLK2)				Prepared & Analyzed: 05/29/20						
Zinc	ND	10	ug/L							
LCS (0E29031-BS1)				Prepared & Analyzed: 05/29/20						
Antimony	344	10	ug/L	332		103	85-115			
Arsenic	340	5.0	ug/L	332		102	85-115			
Barium	340	20	ug/L	332		102	85-115			
Beryllium	330	10	ug/L	332		99	85-115			
Cadmium	336	2.0	ug/L	332		101	85-115			
Total Chromium	343	20	ug/L	332		103	85-115			
Cobalt	337	10	ug/L	332		101	85-115			
Copper	336	10	ug/L	332		101	85-115			
Lead	334	10	ug/L	332		100	85-115			
Manganese	340	10	ug/L	332		102	85-115			
Mercury	2.98	0.20	ug/L	2.79		107	85-115			
Molybdenum	389	10	ug/L	332		117	85-115			QLout
Nickel	333	20	ug/L	332		100	85-115			
Selenium	328	5.0	ug/L	332		99	85-115			
Silver	49.1	10	ug/L	50.1		98	85-115			
Thallium	336	200	ug/L	332		101	85-115			
Zinc	339	10	ug/L	332		102	85-115			
Matrix Spike (0E29031-MS1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Antimony	339	20	ug/L	332	ND	102	70-130			
Arsenic	354	10	ug/L	332	4.97	105	70-130			
Barium	349	40	ug/L	332	4.26	104	70-130			
Beryllium	352	20	ug/L	332	ND	106	70-130			
Cadmium	343	4.0	ug/L	332	ND	103	70-130			
Total Chromium	363	40	ug/L	332	0.983	109	70-130			
Cobalt	358	20	ug/L	332	ND	108	70-130			
Copper	336	20	ug/L	332	ND	101	70-130			
Lead	338	20	ug/L	332	ND	102	70-130			
Manganese	356	20	ug/L	332	ND	107	70-130			
Mercury	2.96	0.40	ug/L	2.79	ND	106	70-130			
Molybdenum	355	20	ug/L	332	ND	107	70-130			
Nickel	348	40	ug/L	332	ND	105	70-130			
Selenium	340	10	ug/L	332	ND	102	70-130			

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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29031 - EPA 200.2										
Matrix Spike (0E29031-MS1)		Source: C0D3709-06			Prepared & Analyzed: 05/29/20					
Silver	51.5	20	ug/L	50.1	ND	103	70-130			
Thallium	344	400	ug/L	332	ND	104	70-130			
Zinc	351	20	ug/L	332	ND	106	70-130			
Matrix Spike Dup (0E29031-MSD1)		Source: C0D3709-06			Prepared & Analyzed: 05/29/20					
Antimony	337	20	ug/L	332	ND	101	70-130	0.5	20	
Arsenic	347	10	ug/L	332	4.87	103	70-130	2	20	
Barium	341	40	ug/L	332	4.26	101	70-130	2	20	
Beryllium	338	20	ug/L	332	ND	102	70-130	4	20	
Cadmium	344	4.0	ug/L	332	ND	103	70-130	0.05	20	
Total Chromium	354	40	ug/L	332	0.983	106	70-130	2	20	
Cobalt	354	20	ug/L	332	ND	107	70-130	1	20	
Copper	339	20	ug/L	332	ND	102	70-130	0.9	20	
Lead	328	20	ug/L	332	ND	99	70-130	3	20	
Manganese	345	20	ug/L	332	ND	104	70-130	3	20	
Mercury	2.83	0.40	ug/L	2.79	ND	101	70-130	4	20	
Molybdenum	355	20	ug/L	332	ND	107	70-130	0.1	20	
Nickel	346	40	ug/L	332	ND	104	70-130	0.7	20	
Selenium	331	10	ug/L	332	ND	100	70-130	3	20	
Silver	50.9	20	ug/L	50.1	ND	102	70-130	1	20	
Thallium	344	400	ug/L	332	ND	103	70-130	0.01	20	
Zinc	345	20	ug/L	332	ND	104	70-130	2	20	
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK1)		Prepared & Analyzed: 05/29/20								
Aluminum	ND	100	ug/L							
Iron	ND	50	ug/L							



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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK2)				Prepared & Analyzed: 05/29/20						
Aluminum	ND	100	ug/L							
Iron	ND	50	ug/L							
LCS (0E29050-BS1)				Prepared & Analyzed: 05/29/20						
Aluminum	1140	100	ug/L	1170		97	85-115			
Iron	1240	50	ug/L	1170		106	85-115			
Matrix Spike (0E29050-MS1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Aluminum	1400	100	ug/L	1170	245	99	70-130			
Iron	1290	50	ug/L	1170	5.88	110	70-130			
Matrix Spike Dup (0E29050-MSD1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Aluminum	1370	100	ug/L	1170	245	96	70-130	2	20	
Iron	1250	50	ug/L	1170	5.88	107	70-130	3	20	
Batch 0F01103 - EPA 200.2										
Blank (0F01103-BLK1)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	ND	10	ug/L							
Blank (0F01103-BLK2)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	ND	10	ug/L							
LCS (0F01103-BS1)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	350	10	ug/L	332		105	85-115			
Matrix Spike (0F01103-MS1)				Source: C0E2737-01		Prepared: 06/01/20 Analyzed: 06/02/20				
Vanadium	417	20	ug/L	332	61.1	107	70-130			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01103 - EPA 200.2										
Matrix Spike Dup (0F01103-MSD1)		Source: C0E2737-01			Prepared: 06/01/20 Analyzed: 06/02/20					
Vanadium	405	20	ug/L	332	61.1	103	70-130	3	20	



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E07140 - EPA 3050B										
Blank (0E07140-BLK1)				Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	ND	1.0	mg/kg							
Arsenic	ND	1.0	mg/kg							
Beryllium	ND	1.0	mg/kg							
Cadmium	ND	1.0	mg/kg							
Total Chromium	ND	1.0	mg/kg							
Cobalt	ND	1.0	mg/kg							
Copper	ND	1.0	mg/kg							
Lead	ND	2.0	mg/kg							
Molybdenum	ND	5.0	mg/kg							
Nickel	ND	1.0	mg/kg							
Selenium	ND	5.0	mg/kg							
Silver	ND	1.0	mg/kg							
Thallium	ND	1.0	mg/kg							
LCS (0E07140-BS1)				Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	199	1.0	mg/kg	200		100	79-132			
Arsenic	198	1.0	mg/kg	200		99	80-120			
Beryllium	197	1.0	mg/kg	200		98	79-124			
Cadmium	198	1.0	mg/kg	200		99	80-122			
Total Chromium	196	1.0	mg/kg	200		98	81-118			
Cobalt	195	1.0	mg/kg	200		97	80-124			
Copper	193	1.0	mg/kg	200		96	80-117			
Lead	202	2.0	mg/kg	200		101	82-124			
Molybdenum	219	5.0	mg/kg	200		110	82-130			
Nickel	190	1.0	mg/kg	200		95	81-117			
Selenium	197	5.0	mg/kg	200		98	74-122			
Silver	9.49	1.0	mg/kg	10.0		95	20-164			
Thallium	192	1.0	mg/kg	200		96	75-118			



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 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E07140 - EPA 3050B										
Duplicate (0E07140-DUP1)		Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	ND	1.0	mg/kg		ND				20	
Arsenic	0.752	1.0	mg/kg		0.782			4	20	
Beryllium	0.181	1.0	mg/kg		0.204			12	20	
Cadmium	ND	1.0	mg/kg		ND				20	
Total Chromium	9.37	1.0	mg/kg		9.48			1	20	
Cobalt	3.89	1.0	mg/kg		3.80			3	20	
Copper	5.79	1.0	mg/kg		5.94			3	20	
Lead	1.93	2.0	mg/kg		1.97			2	20	
Molybdenum	ND	5.0	mg/kg		ND				20	
Nickel	5.34	1.0	mg/kg		5.46			2	20	
Selenium	ND	5.0	mg/kg		ND				20	
Silver	ND	1.0	mg/kg		ND				20	
Thallium	ND	1.0	mg/kg		0.180				20	
Duplicate (0E07140-DUP2)		Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	ND	5.0	mg/kg		ND				20	
Arsenic	ND	5.0	mg/kg		ND				20	
Beryllium	ND	5.0	mg/kg		ND				20	
Cadmium	ND	5.0	mg/kg		ND				20	
Total Chromium	13.1	5.0	mg/kg		9.48			32	20	QRPDI
Cobalt	5.52	5.0	mg/kg		3.80			37	20	QRPDI
Copper	9.77	5.0	mg/kg		5.94			49	20	QRPDI
Lead	ND	10	mg/kg		ND				20	
Molybdenum	ND	25	mg/kg		ND				20	
Nickel	7.98	5.0	mg/kg		5.46			38	20	QRPDI
Selenium	ND	25	mg/kg		ND				20	
Silver	ND	5.0	mg/kg		ND				20	
Thallium	ND	5.0	mg/kg		ND				20	



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E07140 - EPA 3050B										
Matrix Spike (0E07140-MS1)		Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	127	1.0	mg/kg	200	ND	64	10-158			
Arsenic	200	1.0	mg/kg	200	0.782	99	73-122			
Beryllium	177	1.0	mg/kg	200	0.204	88	68-128			
Cadmium	201	1.0	mg/kg	200	ND	100	72-121			
Total Chromium	204	1.0	mg/kg	200	9.48	97	60-129			
Cobalt	195	1.0	mg/kg	200	3.80	98	64-128			
Copper	188	1.0	mg/kg	200	5.94	91	36-141			
Lead	184	2.0	mg/kg	200	1.97	91	60-126			
Molybdenum	213	5.0	mg/kg	200	ND	107	60-140			
Nickel	196	1.0	mg/kg	200	5.46	95	60-135			
Selenium	197	5.0	mg/kg	200	ND	99	65-123			
Silver	9.50	1.0	mg/kg	10.0	ND	95	10-155			
Thallium	180	1.0	mg/kg	200	0.180	90	57-122			
Matrix Spike Dup (0E07140-MSD1)		Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20						
Antimony	122	1.0	mg/kg	200	ND	61	10-158	4	20	
Arsenic	197	1.0	mg/kg	200	0.782	98	73-122	2	20	
Beryllium	173	1.0	mg/kg	200	0.204	86	68-128	2	20	
Cadmium	199	1.0	mg/kg	200	ND	100	72-121	0.9	20	
Total Chromium	200	1.0	mg/kg	200	9.48	95	60-129	2	20	
Cobalt	192	1.0	mg/kg	200	3.80	94	64-128	2	20	
Copper	184	1.0	mg/kg	200	5.94	89	36-141	2	20	
Lead	182	2.0	mg/kg	200	1.97	90	60-126	1	20	
Molybdenum	211	5.0	mg/kg	200	ND	105	60-140	1	20	
Nickel	192	1.0	mg/kg	200	5.46	93	60-135	2	20	
Selenium	194	5.0	mg/kg	200	ND	97	65-123	2	20	
Silver	9.42	1.0	mg/kg	10.0	ND	94	10-155	0.8	20	
Thallium	177	1.0	mg/kg	200	0.180	88	57-122	2	20	



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Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E07144 - EPA 3050B										
Blank (0E07144-BLK1)				Prepared: 05/11/20 Analyzed: 05/12/20						
Aluminum	ND	10	mg/kg							
Iron	ND	20	mg/kg							
LCS (0E07144-BS1)				Prepared: 05/11/20 Analyzed: 05/12/20						
Aluminum	2540	10	mg/kg	2200		115	72-120			
Iron	2270	20	mg/kg	2200		103	80-120			
Matrix Spike (0E07144-MS1)				Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20				
Aluminum	24100	10	mg/kg	2200	8680	NR	61-121			QM-4X
Iron	19000	20	mg/kg	2200	15500	162	36-178			
Matrix Spike Dup (0E07144-MSD1)				Source: C0D3709-01		Prepared: 05/11/20 Analyzed: 05/12/20				
Aluminum	23000	10	mg/kg	2200	8680	NR	61-121	5	25	QM-4X
Iron	19000	20	mg/kg	2200	15500	160	36-178	0.2	25	
Batch 0E08057 - EPA 7471A										
Blank (0E08057-BLK1)				Prepared & Analyzed: 05/12/20						
Mercury	ND	0.050	mg/kg							
LCS (0E08057-BS1)				Prepared & Analyzed: 05/12/20						
Mercury	0.206	0.050	mg/kg	0.200		103	77-115			
Matrix Spike (0E08057-MS1)				Source: C0E1067-02		Prepared & Analyzed: 05/12/20				
Mercury	0.210	0.050	mg/kg	0.200	ND	105	22-150			
Matrix Spike Dup (0E08057-MSD1)				Source: C0E1067-02		Prepared & Analyzed: 05/12/20				
Mercury	0.212	0.050	mg/kg	0.200	ND	106	22-150	0.8	25	



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 60 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E14074 - EPA 3050B										
Blank (0E14074-BLK1)				Prepared & Analyzed: 05/14/20						
Barium	ND	1.0	mg/kg							
Manganese	ND	10	mg/kg							
Vanadium	ND	1.0	mg/kg							
Zinc	ND	1.0	mg/kg							
LCS (0E14074-BS1)				Prepared & Analyzed: 05/14/20						
Barium	203	1.0	mg/kg	200		101	80-120			
Manganese	196	10	mg/kg	200		98	84-122			
Vanadium	188	1.0	mg/kg	200		94	82-122			
Zinc	204	1.0	mg/kg	200		102	75-124			
Duplicate (0E14074-DUP1)				Source: C0D3709-01RE1 Prepared & Analyzed: 05/14/20						
Barium	39.1	1.0	mg/kg		44.6			13	20	
Manganese	188	10	mg/kg		181			4	20	
Vanadium	18.9	1.0	mg/kg		16.8			12	20	
Zinc	42.6	1.0	mg/kg		30.1			34	20	QRPD0
Duplicate (0E14074-DUP2)				Source: C0D3709-01RE1 Prepared & Analyzed: 05/14/20						
Barium	46.8	5.0	mg/kg		44.6			5	20	
Manganese	178	50	mg/kg		181			1	20	
Vanadium	17.1	5.0	mg/kg		16.8			2	20	
Zinc	30.4	5.0	mg/kg		30.1			0.7	20	
Matrix Spike (0E14074-MS1)				Source: C0E1282-01 Prepared & Analyzed: 05/14/20						
Barium	202	1.0	mg/kg	200	8.87	97	61-132			
Manganese	1350	10	mg/kg	200	615	NR	63-135			QFnt, QOcal
Vanadium	198	1.0	mg/kg	200	7.10	98	66-138			
Zinc	287	1.0	mg/kg	200	30.8	128	26-166			



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Analytical Report: Page 61 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E14074 - EPA 3050B										
Matrix Spike Dup (0E14074-MSD1)			Source: C0E1282-01		Prepared & Analyzed: 05/14/20					
Barium	192	1.0	mg/kg	200	8.87	92	61-132	5	20	
Manganese	1190	10	mg/kg	200	615	NR	63-135	13	20	QFnt, QOcal
Vanadium	199	1.0	mg/kg	200	7.10	96	66-136	0.4	20	
Zinc	341	1.0	mg/kg	200	30.8	155	26-166	17	20	
Batch 0E29048 - EPA 3050B										
Blank (0E29048-BLK1)			Prepared & Analyzed: 06/01/20							
Antimony	ND	1.0	mg/kg							
Arsenic	ND	1.0	mg/kg							
Barium	ND	1.0	mg/kg							
Beryllium	ND	1.0	mg/kg							
Cadmium	ND	1.0	mg/kg							
Total Chromium	ND	1.0	mg/kg							
Cobalt	ND	1.0	mg/kg							
Copper	ND	1.0	mg/kg							
Lead	ND	2.0	mg/kg							
Manganese	ND	10	mg/kg							
Molybdenum	ND	5.0	mg/kg							
Nickel	ND	1.0	mg/kg							
Selenium	ND	5.0	mg/kg							
Silver	ND	1.0	mg/kg							
Thallium	ND	1.0	mg/kg							
Vanadium	ND	1.0	mg/kg							
Zinc	ND	1.0	mg/kg							
LCS (0E29048-BS1)										
Prepared & Analyzed: 06/01/20										
Antimony	223	1.0	mg/kg	200		111	79-132			
Arsenic	221	1.0	mg/kg	200		111	80-120			
Barium	223	1.0	mg/kg	200		112	80-120			
Beryllium	220	1.0	mg/kg	200		110	79-124			
Cadmium	223	1.0	mg/kg	200		111	80-122			
Total Chromium	219	1.0	mg/kg	200		109	81-118			
Cobalt	220	1.0	mg/kg	200		110	80-124			
Copper	220	1.0	mg/kg	200		110	80-117			
Lead	221	2.0	mg/kg	200		111	82-124			
Manganese	219	10	mg/kg	200		109	84-122			

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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 62 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29048 - EPA 3050B										
LCS (0E29048-BS1)				Prepared & Analyzed: 06/01/20						
Molybdenum	245	5.0	mg/kg	200		122	82-130			
Nickel	215	1.0	mg/kg	200		107	81-117			
Selenium	213	5.0	mg/kg	200		106	74-122			
Silver	10.9	1.0	mg/kg	10.0		109	20-164			
Thallium	212	1.0	mg/kg	200		106	75-118			
Vanadium	221	1.0	mg/kg	200		111	82-122			
Zinc	220	1.0	mg/kg	200		110	75-124			
Duplicate (0E29048-DUP1)				Source: C0D3709-17		Prepared & Analyzed: 06/01/20				
Antimony	ND	1.0	mg/kg		ND				20	
Arsenic	0.459	1.0	mg/kg		0.442			4	20	
Barium	41.1	1.0	mg/kg		44.5			8	20	
Beryllium	0.189	1.0	mg/kg		0.208			10	20	
Cadmium	ND	1.0	mg/kg		ND				20	
Total Chromium	13.1	1.0	mg/kg		8.31			45	20	QRPDI
Cobalt	3.77	1.0	mg/kg		3.73			1	20	
Copper	8.40	1.0	mg/kg		6.70			22	20	QRPDI
Lead	2.14	2.0	mg/kg		1.84			15	20	
Manganese	186	10	mg/kg		180			4	20	
Molybdenum	ND	5.0	mg/kg		ND				20	
Nickel	5.40	1.0	mg/kg		5.19			4	20	
Selenium	ND	5.0	mg/kg		ND				20	
Silver	ND	1.0	mg/kg		ND				20	
Thallium	ND	1.0	mg/kg		ND				20	
Vanadium	19.7	1.0	mg/kg		20.1			2	20	
Zinc	30.6	1.0	mg/kg		34.1			11	20	
Duplicate (0E29048-DUP2)				Source: C0D3709-17		Prepared & Analyzed: 06/01/20				
Antimony	ND	5.0	mg/kg		ND				20	
Arsenic	ND	5.0	mg/kg		ND				20	
Barium	40.3	5.0	mg/kg		44.5			10	20	
Beryllium	ND	5.0	mg/kg		ND				20	
Cadmium	ND	5.0	mg/kg		ND				20	
Total Chromium	6.63	5.0	mg/kg		8.31			23	20	QRPDI
Cobalt	3.47	5.0	mg/kg		3.73			7	20	
Copper	6.24	5.0	mg/kg		6.70			7	20	

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Analytical Report: Page 63 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29048 - EPA 3050B										
Duplicate (0E29048-DUP2)			Source: C0D3709-17		Prepared & Analyzed: 06/01/20					
Lead	ND	10	mg/kg		ND				20	
Manganese	166	50	mg/kg		180			8	20	
Molybdenum	ND	25	mg/kg		ND				20	
Nickel	4.83	5.0	mg/kg		5.19			7	20	
Selenium	ND	25	mg/kg		ND				20	
Silver	ND	5.0	mg/kg		ND				20	
Thallium	ND	5.0	mg/kg		ND				20	
Vanadium	17.9	5.0	mg/kg		20.1			11	20	
Zinc	28.4	5.0	mg/kg		34.1			19	20	
Matrix Spike (0E29048-MS1)			Source: C0D3709-07		Prepared & Analyzed: 06/01/20					
Antimony	122	1.0	mg/kg	200	ND	61	10-156			
Arsenic	222	1.0	mg/kg	200	1.07	111	73-122			
Barium	275	1.0	mg/kg	200	47.1	114	61-132			
Beryllium	171	1.0	mg/kg	200	0.205	85	68-128			
Cadmium	222	1.0	mg/kg	200	ND	111	72-121			
Total Chromium	231	1.0	mg/kg	200	12.8	109	60-129			
Cobalt	218	1.0	mg/kg	200	4.51	107	64-128			
Copper	218	1.0	mg/kg	200	8.99	104	36-141			
Lead	215	2.0	mg/kg	200	2.69	106	60-126			
Manganese	473	10	mg/kg	200	236	119	63-135			
Molybdenum	243	5.0	mg/kg	200	ND	122	60-140			
Nickel	216	1.0	mg/kg	200	6.83	104	60-135			
Selenium	215	5.0	mg/kg	200	ND	107	65-123			
Silver	10.5	1.0	mg/kg	10.0	ND	105	10-155			
Thallium	206	1.0	mg/kg	200	ND	103	57-122			
Vanadium	251	1.0	mg/kg	200	25.2	113	66-136			
Zinc	256	1.0	mg/kg	200	35.5	110	26-166			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29048 - EPA 3050B										
Matrix Spike Dup (0E29048-MSD1)			Source: C0D3709-07		Prepared & Analyzed: 06/01/20					
Antimony	117	1.0	mg/kg	200	ND	58	10-158	4	20	
Arsenic	220	1.0	mg/kg	200	1.07	109	73-122	1	20	
Barium	276	1.0	mg/kg	200	47.1	114	61-132	0.4	20	
Beryllium	174	1.0	mg/kg	200	0.205	87	68-128	2	20	
Cadmium	223	1.0	mg/kg	200	ND	111	72-121	0.4	20	
Total Chromium	228	1.0	mg/kg	200	12.8	108	60-129	1	20	
Cobalt	213	1.0	mg/kg	200	4.51	104	64-128	2	20	
Copper	213	1.0	mg/kg	200	8.99	102	36-141	2	20	
Lead	217	2.0	mg/kg	200	2.69	107	60-126	0.9	20	
Manganese	463	10	mg/kg	200	236	114	63-135	2	20	
Molybdenum	242	5.0	mg/kg	200	ND	121	60-140	0.3	20	
Nickel	207	1.0	mg/kg	200	6.83	100	60-135	4	20	
Selenium	212	5.0	mg/kg	200	ND	106	65-123	1	20	
Silver	10.5	1.0	mg/kg	10.0	ND	106	10-155	0.4	20	
Thallium	204	1.0	mg/kg	200	ND	102	57-122	0.8	20	
Vanadium	248	1.0	mg/kg	200	25.2	112	66-136	1	20	
Zinc	256	1.0	mg/kg	200	35.5	110	26-166	0.02	20	
Batch 0E29049 - EPA 3050B										
Blank (0E29049-BLK1)			Prepared & Analyzed: 06/01/20							
Aluminum	ND	10	mg/kg							
Iron	ND	20	mg/kg							
LCS (0E29049-BS1)			Prepared & Analyzed: 06/01/20							
Aluminum	4230	10	mg/kg	4200		101	72-120			
Iron	214	20	mg/kg	200		107	80-120			



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Analytical Report: Page 65 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
 Received on Ice (Y/N): Yes Temp: 16 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29049 - EPA 3050B										
Matrix Spike (0E29049-MS1)		Source: C0D3709-03		Prepared & Analyzed: 06/01/20						
Aluminum	11900	10	mg/kg	4200	6920	118	61-121			
Iron	13900	20	mg/kg	200	12500	NR	36-178			QM-4X
Matrix Spike Dup (0E29049-MSD1)		Source: C0D3709-03		Prepared & Analyzed: 06/01/20						
Aluminum	11900	10	mg/kg	4200	6920	118	61-121	0.2	25	
Iron	13100	20	mg/kg	200	12500	NR	36-178	6	25	QM-4X
Batch 0E29056 - EPA 7471A										
Blank (0E29056-BLK1)		Prepared & Analyzed: 06/02/20								
Mercury	ND	0.050	mg/kg							
LCS (0E29056-BS1)		Prepared & Analyzed: 06/02/20								
Mercury	0.202	0.050	mg/kg	0.200		101	77-115			
Matrix Spike (0E29056-MS1)		Source: C0D3709-05		Prepared & Analyzed: 06/02/20						
Mercury	0.198	0.050	mg/kg	0.200	ND	99	22-150			
Matrix Spike Dup (0E29056-MSD1)		Source: C0D3709-05		Prepared & Analyzed: 06/02/20						
Mercury	0.204	0.050	mg/kg	0.200	ND	102	22-150	3	25	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E08046 - Solvent Extraction										
Blank (0E08046-BLK1)				Prepared & Analyzed: 05/08/20						
DRO (C10-C28)	ND	10	mg/kg							
ORO (C29-C44)	ND	10	mg/kg							
Surrogate: o-Terphenyl	1.3		mg/kg	1.88		69	10-142			
Surrogate: n-Triacontane	0.91		mg/kg	2.75		33	10-118			
LCS (0E08046-BS1)				Prepared & Analyzed: 05/08/20						
DRO (C10-C28)	29.0	10	mg/kg	40.0		72	49-111			
ORO (C29-C44)	30.8	10	mg/kg	40.0		77	46-108			
Surrogate: o-Terphenyl	1.5		mg/kg	1.88		79	10-142			
Surrogate: n-Triacontane	1.2		mg/kg	2.75		44	10-118			
Matrix Spike (0E08046-MS1)				Source: C0D3732-01		Prepared & Analyzed: 05/08/20				
DRO (C10-C28)	20.9	10	mg/kg	40.0	ND	52	10-154			
ORO (C29-C44)	22.3	10	mg/kg	40.0	3.50	47	10-185			
Surrogate: o-Terphenyl	1.0		mg/kg	1.88		53	10-142			
Surrogate: n-Triacontane	0.82		mg/kg	2.75		30	10-118			
Matrix Spike Dup (0E08046-MSD1)				Source: C0D3732-01		Prepared & Analyzed: 05/08/20				
DRO (C10-C28)	23.4	10	mg/kg	40.0	ND	58	10-154	11	40	
ORO (C29-C44)	25.2	10	mg/kg	40.0	3.50	54	10-185	12	40	
Surrogate: o-Terphenyl	1.1		mg/kg	1.88		60	10-142			
Surrogate: n-Triacontane	0.95		mg/kg	2.75		35	10-118			
Batch 0E26090 - Solvent Extraction										
Blank (0E26090-BLK1)				Prepared & Analyzed: 05/26/20						
DRO (C10-C28)	ND	10	mg/kg							
ORO (C29-C44)	ND	10	mg/kg							
Surrogate: o-Terphenyl	1.1		mg/kg	1.88		59	10-142			
Surrogate: n-Triacontane	0.41		mg/kg	2.75		15	10-118			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E26090 - Solvent Extraction										
LCS (0E26090-BS1)				Prepared & Analyzed: 05/26/20						
DRO (C10-C28)	30.7	10	mg/kg	40.0		77	49-111			
ORO (C29-C44)	33.9	10	mg/kg	40.0		85	46-108			
Surrogate: o-Terphenyl	1.5		mg/kg	1.88		78	10-142			
Surrogate: n-Triacontane	0.98		mg/kg	2.75		36	10-118			
Matrix Spike (0E26090-MS1)				Source: C0D3709-03		Prepared & Analyzed: 05/26/20				
DRO (C10-C28)	25.3	10	mg/kg	40.0	ND	63	10-154			
ORO (C29-C44)	30.9	10	mg/kg	40.0	4.41	68	10-185			
Surrogate: o-Terphenyl	1.2		mg/kg	1.88		62	10-142			
Surrogate: n-Triacontane	0.97		mg/kg	2.75		35	10-118			
Matrix Spike Dup (0E26090-MSD1)				Source: C0D3709-03		Prepared & Analyzed: 05/26/20				
DRO (C10-C28)	26.2	10	mg/kg	40.0	ND	65	10-154	4	40	
ORO (C29-C44)	33.1	10	mg/kg	40.0	4.41	72	10-185	7	40	
Surrogate: o-Terphenyl	1.2		mg/kg	1.88		66	10-142			
Surrogate: n-Triacontane	1.0		mg/kg	2.75		38	10-118			
Batch 0E29039 - Solvent Extraction										
Blank (0E29039-BLK1)				Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	ND	5.0	mg/L							
ORO (C29-C44)	ND	5.0	mg/L							
Surrogate: o-Terphenyl	1.7		mg/L	2.14		78	49-114			
Surrogate: n-Triacontane	1.3		mg/L	3.14		40	10-122			
LCS (0E29039-BS1)				Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	23.2	5.0	mg/L	28.6		81	45-122			
ORO (C29-C44)	24.9	5.0	mg/L	28.6		87	34-128			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		83	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29039 - Solvent Extraction										
Matrix Spike (0E29039-MS1)		Source: C0D3709-02		Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	23.2	5.0	mg/L	28.6	ND	81	23-133			
ORO (C29-C44)	25.3	5.0	mg/L	28.6	ND	88	22-118			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		82	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		43	10-122			
Matrix Spike Dup (0E29039-MSD1)		Source: C0D3709-02		Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	23.1	5.0	mg/L	28.6	ND	81	23-133	0.2	40	
ORO (C29-C44)	24.8	5.0	mg/L	28.6	ND	87	22-118	2	40	
Surrogate: o-Terphenyl	1.8		mg/L	2.14		83	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		43	10-122			
Batch 0F01108 - Solvent Extraction										
Blank (0F01108-BLK1)		Prepared & Analyzed: 06/01/20								
DRO (C10-C28)	ND	5.0	mg/L							
ORO (C29-C44)	ND	5.0	mg/L							
Surrogate: o-Terphenyl	1.8		mg/L	2.14		82	49-114			
Surrogate: n-Triacontane	1.3		mg/L	3.14		41	10-122			
LCS (0F01108-BS1)		Prepared & Analyzed: 06/01/20								
DRO (C10-C28)	24.2	5.0	mg/L	28.6		85	45-122			
ORO (C29-C44)	23.9	5.0	mg/L	28.6		83	34-128			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		84	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			
Matrix Spike (0F01108-MS1)		Source: C0D3709-06		Prepared & Analyzed: 06/01/20						
DRO (C10-C28)	24.1	5.0	mg/L	28.6	ND	84	23-133			
ORO (C29-C44)	24.2	5.0	mg/L	28.6	ND	85	22-118			
Surrogate: o-Terphenyl	1.9		mg/L	2.14		87	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 69 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01108 - Solvent Extraction										
Matrix Spike Dup (0F01108-MSD1)		Source: C0D3709-06			Prepared & Analyzed: 06/01/20					
DRO (C10-C28)	24.1	5.0	mg/L	28.6	ND	84	23-133	0.2	40	
ORO (C29-C44)	24.0	5.0	mg/L	28.6	ND	84	22-118	0.5	40	
Surrogate: o-Terphenyl	1.8		mg/L	2.14		84	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 70 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E05094 - Purge and Trap										
Blank (0E05094-BLK1)				Prepared & Analyzed: 05/05/20						
Gasoline Range Organics	ND	5.0	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	11		mg/kg	10.8		101	11-140			
LCS (0E05094-BS1)				Prepared & Analyzed: 05/05/20						
Gasoline Range Organics	45.7	5.0	mg/kg	50.0		91	70-130			
Surrogate: a,a,a-Trifluorotoluene	11		mg/kg	10.8		100	11-140			
LCS Dup (0E05094-BSD1)				Prepared & Analyzed: 05/05/20						
Gasoline Range Organics	44.0	5.0	mg/kg	50.0		88	70-130	4	40	
Surrogate: a,a,a-Trifluorotoluene	10		mg/kg	10.8		93	11-140			
Matrix Spike (0E05094-MS1)				Source: C0D3709-01	Prepared & Analyzed: 05/05/20					
Gasoline Range Organics	34.8	5.0	mg/kg	50.0	ND	70	15-165			
Surrogate: a,a,a-Trifluorotoluene	10		mg/kg	10.8		97	11-140			
Matrix Spike Dup (0E05094-MSD1)				Source: C0D3709-01	Prepared & Analyzed: 05/05/20					
Gasoline Range Organics	35.2	5.0	mg/kg	50.0	ND	70	15-165	1	40	
Surrogate: a,a,a-Trifluorotoluene	10		mg/kg	10.8		94	11-140			
Batch 0E28088 - Purge and Trap										
Blank (0E28088-BLK1)				Prepared & Analyzed: 05/28/20						
Gasoline Range Organics	ND	5.0	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	10		mg/kg	10.8		93	11-140			
LCS (0E28088-BS1)				Prepared & Analyzed: 05/28/20						
Gasoline Range Organics	37.8	5.0	mg/kg	50.0		75	70-130			
Surrogate: a,a,a-Trifluorotoluene	10		mg/kg	10.8		95	11-140			



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 71 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E28088 - Purge and Trap										
LCS Dup (0E28088-BSD1)				Prepared & Analyzed: 05/28/20						
Gasoline Range Organics	41.0	5.0	mg/kg	50.0		82	70-130	9	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	11		mg/kg	10.8		102	11-140			
Matrix Spike (0E28088-MS1)				Source: C0D3709-03		Prepared & Analyzed: 05/28/20				
Gasoline Range Organics	31.4	5.0	mg/kg	50.0	ND	63	15-165			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	9.6		mg/kg	10.8		89	11-140			
Matrix Spike Dup (0E28088-MSD1)				Source: C0D3709-03		Prepared & Analyzed: 05/28/20				
Gasoline Range Organics	30.8	5.0	mg/kg	50.0	ND	61	15-165	3	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	11		mg/kg	10.8		101	11-140			
Batch 0E29042 - Purge and Trap										
Blank (0E29042-BLK1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	ND	0.050	mg/L							
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.42		mg/L	0.500		85	64-120			
LCS (0E29042-BS1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	2.27	0.050	mg/L	2.32		98	70-130			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.46		mg/L	0.500		92	64-120			
LCS Dup (0E29042-BSD1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	2.14	0.050	mg/L	2.32		92	70-130	6	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.48		mg/L	0.500		97	64-120			
Matrix Spike (0E29042-MS1)				Source: C0D3709-02		Prepared & Analyzed: 05/29/20				
Gasoline Range Organics	2.75	0.050	mg/L	2.50	ND	110	70-151			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.46		mg/L	0.500		92	64-120			



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 72 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29042 - Purge and Trap										
Matrix Spike Dup (0E29042-MSD1)		Source: C0D3709-02		Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	2.46	0.050	mg/L	2.50	ND	98	70-151	11	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.49		mg/L	0.500		98	64-120			
Batch 0F01106 - Purge and Trap										
Blank (0F01106-BLK1)		Prepared & Analyzed: 06/01/20								
Gasoline Range Organics	ND	0.050	mg/L							
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.40		mg/L	0.500		81	64-120			
LCS (0F01106-BS1)		Prepared & Analyzed: 06/01/20								
Gasoline Range Organics	2.08	0.050	mg/L	2.32		90	70-130			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.45		mg/L	0.500		89	64-120			
LCS Dup (0F01106-BSD1)		Prepared & Analyzed: 06/01/20								
Gasoline Range Organics	1.96	0.050	mg/L	2.32		85	70-130	6	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.46		mg/L	0.500		92	64-120			
Matrix Spike (0F01106-MS1)		Source: C0E1012-01		Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	2.20	0.050	mg/L	2.50	ND	88	70-151			
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.44		mg/L	0.500		88	64-120			
Matrix Spike Dup (0F01106-MSD1)		Source: C0E1012-01		Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	2.31	0.050	mg/L	2.50	ND	92	70-151	5	40	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	0.46		mg/L	0.500		92	64-120			



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 73 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Notes and Definitions

pH:	Regulatory 15 minute holding time exceeded	C0D3709-02
pH:	Regulatory 15 minute holding time exceeded	C0D3709-04
pH:	Regulatory 15 minute holding time exceeded	C0D3709-06
pH:	Regulatory 15 minute holding time exceeded	C0D3709-08
pH:	Regulatory 15 minute holding time exceeded	C0D3709-10
pH:	Regulatory 15 minute holding time exceeded	C0D3709-12
pH:	Regulatory 15 minute holding time exceeded	C0D3709-14



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 74 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

N_HTa Sample analyzed outside of the EPA recommended holding time.

N_HTp Analysis requested near or past holding time. Sample analyzed outside of the EPA recommended holding time.

N_HTr Sample received past regulatory holding time.

NLOhND LCS recovery was above method control limit for this analyte. Analyte not detected, therefore data not impacted.

NRPDo The RPD/precision of replicate analyses performed on this sample did not meet laboratory acceptance criteria.

QFnt The referenced sample did not require this QC analyte, so a follow-up is not needed.

QLout The LCS and/or LCSD recovery did not meet laboratory acceptance criteria.

QM-4X Due to analyte concentration greater than or equal to 4 times the spike concentration, recoveries for the MS and/or MSD did not meet laboratory acceptance criteria.

QMS(D) Matrix spike recovery was out of acceptance criteria. Precision and accuracy demonstrated by remaining matrix spike results.

QOcal The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

Qraw Based on raw data excluding numerical rounding, QC recovery was within laboratory acceptance criteria.

QRPDI RPD exceeds control limit due to one or both results being trace (estimated) values below laboratory reporting limit.

QRPDO The RPD value for the sample duplicate or MS/MSD did not meet laboratory acceptance criteria.

ND: Analyte NOT DETECTED at or above the Method Detection Limit (if MDL is reported), otherwise at or above the Reportable Detection Limit (RDL)

NR: Not Reported

RDL: Reportable Detection Limit

MDL: Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 75 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

This report applies only to the sample(s) analyzed. As a mutual protection to clients, the public, and Babcock Laboratories, Inc., this report is submitted and accepted for the exclusive use of the Client to whom it is addressed. Interpretation and use of the information contained within this report are the sole responsibility of the Client. Babcock Laboratories, Inc. is not responsible for any misinformation or consequences that may result from misinterpretation or improper use of this report. This report is not to be modified or abbreviated in any way. Additionally, this report is not to be used, in whole or in part, in any advertising or publicity matter without written authorization from Babcock Laboratories, Inc. The liability of Babcock Laboratories, Inc. is limited to the actual cost of the requested analyses, unless otherwise agreed upon in writing. There is no other warranty expressed or implied.

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CA ELAP No. 2698
EPANo. CA00102
NELAP No. OR4035
LACSD No. 10119



BABCOCK Laboratories, Inc.
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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 76 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: C0D3709
Received on Ice (Y/N): Yes Temp: 16 °C



6100 Quail Valley Court Riverside, CA 92507
(951) 653-3351 • FAX (951) 653-1662
www.babcocklabs.com

Chain of Custody & Sample Information Record

Client: <u>TODD CHAPMAN ECORP CONSULTING INC.</u>		Fax No.		Additional Reporting Requests	
Phone No. <u>714-721-2862</u>		email:		Include QC Data Package: ☐ Yes ☐ No	
Project Name: <u>Whitewater River</u>		Turn Around Time: Routine *72 Hour Rush *48 Hour Rush *24 Hour Rush		FAX Results: ☐ Yes ☐ No	
Project Location: <u>Whitewater, CA</u>		*Lab TAT Approval: By:		Email Results: ☐ Yes ☐ No	
		*Additional Charges Apply		State EDT: ☐ Yes ☐ No	
				(Include Source Number in Notes)	
Sampler Information		# of Containers & Preservatives		Analysis Requested	
Name: <u>TODD CHAPMAN</u>		Unpreserved		Matrix	
Employer: <u>ECORP CONSULTING INC.</u>		H ₂ SO ₄		DW = Drinking Water	
Signature: <u>Todd</u>		HCl		WW = Waste Water	
		HNO ₃		GW = Ground Water	
		Na ₂ S ₂ O ₈		S = Source	
		NaOH		SG = Sludge	
		NaOH/Zn Acetate		L = Liquid	
		NH ₄ Cl		M = Miscellaneous	
		PDC			
Sample ID		Date		Time	
POND 1		3/3/2020			
POND 2		3/2/2020			
POND 5		3/2/2020			
POND 12		3/3/2020			
POND 14		3/3/2020			
POND 19		3/3/2020			
BACKGROUND		3/4/2020			
UPSTREAM WASH		3/4/2020			
SEDIMENT PLACEMENT		3/2/2020			
Relinquished By (sign)		Print Name / Company		Date / Time	
<u>Todd</u>		TODD CHAPMAN/ECORP		3/4/2020 17:15	
Received By (sign)		Print Name / Company		Date / Time	
<u>Chapman/Babcock</u>		Chapman/Babcock			

By signing on behalf of your organization and relinquishing this chain of custody you agree to abide by the Babcock Laboratories, Inc. Terms and Conditions.

(For Lab Use Only)

Sample Integrity Upon Receipt/Acceptance Criteria

Sample(s) Submitted on Ice? ☒ Yes ☐ No
Custody Seal(s) Intact? ☒ Yes ☐ No ☒ NA
Sample(s) Intact? ☒ Yes ☐ No
Temperature: 16 °C ☐ Cooler Blank
Sample meets laboratory acceptance criteria? ☒ Yes ☐ No
Permission to continue: ☒ Yes ☐ No
Deviation/Notes: _____
Signature/Date: _____

C0D3709

Rc'd: 03/04/2020 17:15

IG



Rev: 4/18

mailing
P.O. Box 432
Riverside, CA 92502-0432

location
6100 Quail Valley Court
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CA ELAP No. 2698
EPANo. CA00102
NELAP No. OR4035
LACSD No. 10119



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 77 of 78
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
Received on Ice (Y/N): Yes Temp: 16 °C

Project Information

Printed: 04/30/2020 1:25 pm

ECORP Consulting, Inc.

2861 Pullman Street
Santa Ana, CA 92705
Laboratory PM: Cindy A. Waddell

8303

Phone: (714) 648-0630
Fax: (714) 648-0935

Project Name:	Whitewater Project 2020	Invoice To:	ECORP Consulting, Inc.
Project Number:	Soil Composites 2020	Invoice Bid:	Soil Composites 2020
Client PM:	Todd Chapman	Invoice Manager:	Todd Chapman
Comments:	Special Handling = Compositing samples at lab. Waste Extraction (WET) using DI water.		

Analysis	Comment
Hardness Total-WW	
Fluoride	
FE_ICP_WW	
FE_ICP_SW	
EC	
8015-TPH-DRO/ORO	
8015-TPH-G	
AL_ICP_SW	
AL_ICP_WW	
CI	
CA_ICP_WW	
Metals CA17-SW	
Alkalinity	
K_ICP_WW	
SO4	
Solids-Total Diss	
Phos-Total	
TOC	
WET	
Special Handling	
NA_ICP_WW	
Metals CA17-WW	
MG_ICP_WW	
MN_ICPMS_SW	
MN_ICPMS_WW	
MBAS	
NO3-N	
pH	
Metals CA17-SW subanalyses:	
CD_ICPMS_SW	
HG_CVAA_SW	
CU_ICPMS_SW	
CR_ICPMS_SW	
CO_ICPMS_SW	
AG_ICPMS_SW	
AS_ICPMS_SW	
BA_ICPMS_SW	
BE_ICPMS_SW	
TL_ICPMS_SW	
SE_ICPMS_SW	
SB_ICPMS_SW	

C0D3709

Rc'd: 03/04/2020 17:15
AG





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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 78 of 78
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 08-Jun-2020

Work Order Number: **C0D3709**
 Received on Ice (Y/N): Yes Temp: 16 °C

Project Information
 (Continued)

Printed: 04/30/2020 1:25 pm

ECORP Consulting, Inc.

2861 Pullman Street
 Santa Ana, CA 92705
 Laboratory PM: Cindy A. Waddell

8303

Phone: (714) 648-0630
 Fax: (714) 648-0935

Project Name: Whitewater Project 2020	Invoice To: ECORP Consulting, Inc.
Project Number: Soil Composites 2020	Invoice Bid: Soil Composites 2020
Client PM: Todd Chapman	Invoice Manager: Todd Chapman
Comments: Special Handling = Compositing samples at lab. Waste Extraction (WET) using DI water.	

Analysis	Comment
TAD	
V_ICPMS_SW	
ZN_ICPMS_SW	
NI_ICPMS_SW	
PB_ICPMS_SW	
MO_ICPMS_SW	
Metals CA17-WW subanalyses:	
HG_ICPMS_WW	
CU_ICPMS_WW	
CR_ICPMS_WW	
CO_ICPMS_WW	
AS_ICPMS_WW	
AG_ICPMS_WW	
CD_ICPMS_WW	
BA_ICPMS_WW	
BE_ICPMS_WW	
SE_ICPMS_WW	
TL_ICPMS_WW	
V_ICPMS_WW	
ZN_ICPMS_WW	
SB_ICPMS_WW	
MO_ICPMS_WW	
NI_ICPMS_WW	
PB_ICPMS_WW	

C0D3709

Rc'd: 03/04/2020 17:15
 AG





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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 1 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

Lab Sample #	Client Sample ID	Matrix	Date Sampled	By	Date Submitted	By
C0E1012-01	Pond 1 (Leachate w/ Colorado Water River)	Liquid	03/3/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-02	Pond 2 (Leachate w/ Colorado Water River)	Liquid	03/2/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-03	Pond 5 (Leachate w/Colorado Water River)	Liquid	03/2/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-04	Pond 12 (Leachate w/Colorado Water River)	Liquid	03/3/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-05	Pond 14 (Leachate w/ Colorado Water River)	Liquid	03/3/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-06	Pond 19 (Leachate w/ Colorado Water River)	Liquid	03/3/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-07	Background (Leachate w/ Colorado Water River)	Liquid	03/4/20 0:00	Todd Chapman	05/08/20 11:05	Torrey
C0E1012-09	Colorado River Water Background	Liquid	03/4/20 0:00	Todd Chapman	05/08/20 11:05	Torrey

Note: Sample identified as Upstream Wash, C0E1012-08 was cancelled, sample was not received at laboratory.



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 2 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:43	KSL	
Calcium	73	1.0	mg/L	EPA 200.7	05/29/20 15:43	KSL	
Magnesium	25	1.0	mg/L	EPA 200.7	05/29/20 15:43	KSL	
Sodium	85	1.0	mg/L	EPA 200.7	05/29/20 15:43	KSL	
Potassium	6.8	1.0	mg/L	EPA 200.7	05/29/20 15:43	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:27	BBR	N_HTp
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:27	BBR	N_HTp
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:27	BBR	N_HTp
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:27	BBR	N_HTp
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 04:18	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 04:18	KAA	
Nitrate as N	0.28	0.20	mg/L	EPA 300.0	05/29/20 04:18	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	06/01/20 15:27	BBR	N_HTp
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	06/01/20 15:27	BBR	N_HTp
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.5	0.70	mg/L	SM 5310B	05/29/20 14:25	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
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Analytical Report: Page 3 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:43	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Barium	69	20	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:43	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:46	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:46	KRV	
Vanadium	21	10	ug/L	EPA 200.8	06/02/20 14:52	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:46	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
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Analytical Report: Page 4 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 1 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 20:37	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 20:37	NAA	N_HTr
Surrogate: o-Terphenyl	79%	49-114		EPA 8015B	05/29/20 20:37	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 20:37	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 17:26	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	83%	64-120		EPA 8015B	06/01/20 17:26	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 5 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:45	KSL	
Calcium	72	1.0	mg/L	EPA 200.7	05/29/20 15:45	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:45	KSL	
Sodium	83	1.0	mg/L	EPA 200.7	05/29/20 15:45	KSL	
Potassium	6.8	1.0	mg/L	EPA 200.7	05/29/20 15:45	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:36	BBR	N_HTp
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:36	BBR	N_HTp
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:36	BBR	N_HTp
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	06/01/20 15:36	BBR	N_HTp
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 04:30	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 04:30	KAA	
Nitrate as N	0.25	0.20	mg/L	EPA 300.0	05/29/20 04:30	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	06/01/20 15:36	BBR	
Specific Conductance	920	1.0	umhos/cm	SM 2510 B	06/01/20 15:36	BBR	N_HTp
Solids							
Total Dissolved Solids	560	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.4	0.70	mg/L	SM 5310B	05/29/20 14:40	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 6 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:45	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Barium	73	20	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:45	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:48	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:48	KRV	
Vanadium	23	10	ug/L	EPA 200.8	06/02/20 14:55	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:48	KRV	



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 7 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 2 (Leachate w/ Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:02	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:02	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 21:02	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 21:02	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 18:04	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	89%	64-120		EPA 8015B	06/01/20 18:04	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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Analytical Report: Page 8 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:47	KSL	
Calcium	72	1.0	mg/L	EPA 200.7	05/29/20 15:47	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:47	KSL	
Sodium	85	1.0	mg/L	EPA 200.7	05/29/20 15:47	KSL	
Potassium	6.5	1.0	mg/L	EPA 200.7	05/29/20 15:47	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:39	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:39	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:39	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:39	BBR	
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 04:42	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 04:42	KAA	
Nitrate as N	0.23	0.20	mg/L	EPA 300.0	05/29/20 04:42	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.2	1.0	pH Units	SM 4500H+ B	05/29/20 14:39	BBR	
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	05/29/20 14:39	BBR	
Solids							
Total Dissolved Solids	540	20	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.4	0.70	mg/L	SM 5310B	05/29/20 14:54	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 9 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 07:30	EGV	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:47	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Barium	72	20	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:47	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 15:50	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 15:50	KRV	
Vanadium	21	10	ug/L	EPA 200.8	06/02/20 14:57	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 15:50	KRV	



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Client Name: ECORP Consulting, Inc.
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Analytical Report: Page 10 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 5 (Leachate w/Colorado Water River)	Liquid	03/02/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:27	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:27	NAA	N_HTr
Surrogate: o-Terphenyl	80%	49-114		EPA 8015B	05/29/20 21:27	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 21:27	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 18:43	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	87%	64-120		EPA 8015B	06/01/20 18:43	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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Analytical Report: Page 11 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:49	KSL	
Calcium	73	1.0	mg/L	EPA 200.7	05/29/20 15:49	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:49	KSL	
Sodium	84	1.0	mg/L	EPA 200.7	05/29/20 15:49	KSL	
Potassium	6.6	1.0	mg/L	EPA 200.7	05/29/20 15:49	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:48	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:48	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:48	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:48	BBR	
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 04:54	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 04:54	KAA	
Nitrate as N	0.26	0.20	mg/L	EPA 300.0	05/29/20 04:54	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.2	1.0	pH Units	SM 4500H+ B	05/29/20 14:48	BBR	
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	05/29/20 14:48	BBR	
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.5	0.70	mg/L	SM 5310B	05/29/20 15:10	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 12 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 22:30	DAD	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:49	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Barium	69	20	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:49	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8	05/29/20 16:02	KRV	N_HTa
				ATP			
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 16:02	KRV	
Vanadium	27	10	ug/L	EPA 200.8	06/02/20 14:59	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 16:02	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 13 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-04

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 12 (Leachate w/Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:52	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 21:52	NAA	N_HTr
Surrogate: o-Terphenyl	79%	49-114		EPA 8015B	05/29/20 21:52	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 21:52	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 19:22	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	88%	64-120		EPA 8015B	06/01/20 19:22	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 14 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:52	KSL	
Calcium	71	1.0	mg/L	EPA 200.7	05/29/20 15:52	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:52	KSL	
Sodium	83	1.0	mg/L	EPA 200.7	05/29/20 15:52	KSL	
Potassium	6.2	1.0	mg/L	EPA 200.7	05/29/20 15:52	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:56	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:56	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:56	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 14:56	BBR	
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 05:06	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 05:06	KAA	
Nitrate as N	0.23	0.20	mg/L	EPA 300.0	05/29/20 05:06	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	05/29/20 14:56	BBR	
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	05/29/20 14:56	BBR	
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.5	0.70	mg/L	SM 5310B	05/29/20 15:26	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
 Santa Ana, CA 92705

Analytical Report: Page 15 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 22:30	DAD	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:52	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Barium	85	20	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:52	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8	05/29/20 16:04	KRV	N_HTa
				ATP			
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 16:04	KRV	
Vanadium	26	10	ug/L	EPA 200.8	06/02/20 15:02	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 16:04	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
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Analytical Report: Page 16 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 14 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	06/01/20 14:21	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	06/01/20 14:21	NAA	N_HTr
Surrogate: o-Terphenyl	83%	49-114		EPA 8015B	06/01/20 14:21	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	06/01/20 14:21	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 20:01	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	98%	64-120		EPA 8015B	06/01/20 20:01	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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Analytical Report: Page 17 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	270	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:54	KSL	
Calcium	70	1.0	mg/L	EPA 200.7	05/29/20 15:54	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:54	KSL	
Sodium	82	1.0	mg/L	EPA 200.7	05/29/20 15:54	KSL	
Potassium	6.3	1.0	mg/L	EPA 200.7	05/29/20 15:54	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:05	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:05	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:05	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:05	BBR	
Chloride	88	1.0	mg/L	EPA 300.0	05/29/20 05:18	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 05:18	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 05:18	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	05/29/20 15:05	BBR	
Specific Conductance	910	1.0	umhos/cm	SM 2510 B	05/29/20 15:05	BBR	
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.3	0.70	mg/L	SM 5310B	05/29/20 15:42	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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 Santa Ana, CA 92705

Analytical Report: Page 18 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 22:30	DAD	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:54	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Barium	75	20	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:54	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Manganese	19	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 16:07	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 16:07	KRV	
Vanadium	26	10	ug/L	EPA 200.8	06/02/20 15:04	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 16:07	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
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Analytical Report: Page 19 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Pond 19 (Leachate w/ Colorado Water River)	Liquid	03/03/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 22:16	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 22:16	NAA	N_HTr
Surrogate: o-Terphenyl	83%	49-114		EPA 8015B	05/29/20 22:16	NAA	N_HTr
Surrogate: n-Triacontane	41%	10-122		EPA 8015B	05/29/20 22:16	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	06/01/20 20:39	EEC	N_HTr
Surrogate: a,a,a-Trifluorotoluene	83%	64-120		EPA 8015B	06/01/20 20:39	EEC	N_HTr



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
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Analytical Report: Page 20 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ Colorado Water River)	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:56	KSL	
Calcium	75	1.0	mg/L	EPA 200.7	05/29/20 15:56	KSL	
Magnesium	23	1.0	mg/L	EPA 200.7	05/29/20 15:56	KSL	
Sodium	83	1.0	mg/L	EPA 200.7	05/29/20 15:56	KSL	
Potassium	6.9	1.0	mg/L	EPA 200.7	05/29/20 15:56	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:13	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:13	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:13	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:13	BBR	
Chloride	89	1.0	mg/L	EPA 300.0	05/29/20 05:53	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 05:53	KAA	
Nitrate as N	0.21	0.20	mg/L	EPA 300.0	05/29/20 05:53	KAA	
Fluoride	0.4	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	05/29/20 15:13	BBR	
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	05/29/20 15:13	BBR	
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.4	0.70	mg/L	SM 5310B	05/29/20 15:59	KSL	N_HTa



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Client Name: ECORP Consulting, Inc.
 Contact: Todd Chapman
 Address: 2861 Pullman Street
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Analytical Report: Page 21 of 49
 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ Colorado Water River)	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 22:30	DAD	
Nutrients							
Total Phosphorus	0.05	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:56	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Barium	69	20	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:56	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Manganese	17	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8 ATP	05/29/20 16:09	KRV	N_HTa
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 16:09	KRV	
Vanadium	24	10	ug/L	EPA 200.8	06/02/20 15:06	KRV	
Zinc	ND	10	ug/L	EPA 200.8	05/29/20 16:09	KRV	



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Background (Leachate w/ Colorado Water River)	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 22:41	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 22:41	NAA	N_HTr
Surrogate: o-Terphenyl	78%	49-114		EPA 8015B	05/29/20 22:41	NAA	N_HTr
Surrogate: n-Triacontane	39%	10-122		EPA 8015B	05/29/20 22:41	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 21:19	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	98%	64-120		EPA 8015B	05/29/20 21:19	JES	N_HTr



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Colorado River Water Background	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Cations							
Total Hardness	280	6.0	mg/L	SM 2340B/EPA 200.7	05/29/20 15:58	KSL	
Calcium	72	1.0	mg/L	EPA 200.7	05/29/20 15:58	KSL	
Magnesium	24	1.0	mg/L	EPA 200.7	05/29/20 15:58	KSL	
Sodium	83	1.0	mg/L	EPA 200.7	05/29/20 15:58	KSL	
Potassium	4.3	1.0	mg/L	EPA 200.7	05/29/20 15:58	KSL	
Anions							
Total Alkalinity	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:21	BBR	
Hydroxide	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:21	BBR	
Carbonate	ND	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:21	BBR	
Bicarbonate	140	5.0	mg/L as CaCO3	SM 2320B	05/29/20 15:21	BBR	
Chloride	90	1.0	mg/L	EPA 300.0	05/29/20 06:17	KAA	
Sulfate	210	0.50	mg/L	EPA 300.0	05/29/20 06:17	KAA	
Nitrate as N	ND	0.20	mg/L	EPA 300.0	05/29/20 06:17	KAA	
Fluoride	0.3	0.1	mg/L	SM 4500F B C	06/01/20 08:40	KBS	
Aggregate Properties							
pH	8.3	1.0	pH Units	SM 4500H+ B	05/29/20 15:21	BBR	
Specific Conductance	930	1.0	umhos/cm	SM 2510 B	05/29/20 15:21	BBR	
Solids							
Total Dissolved Solids	570	10	mg/L	SM 2540C	06/01/20 09:35	KAA	
Aggregate Organic Compounds							
Total Organic Carbon	2.6	0.70	mg/L	SM 5310B	05/29/20 16:15	KSL	N_HTa



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Colorado River Water Background	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Surfactants							
MBAS	ND	0.08	mg/L	SM 5540C	05/29/20 22:30	DAD	
Nutrients							
Total Phosphorus	ND	0.05	mg/L	SM 4500P B E	05/29/20 13:03	AJH	
Metals and Metalloids							
Aluminum	ND	100	ug/L	EPA 200.7	05/29/20 15:58	KSL	
Antimony	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Arsenic	ND	5.0	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Barium	110	20	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Beryllium	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Cadmium	ND	2.0	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Total Chromium	ND	20	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Cobalt	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Copper	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Iron	ND	50	ug/L	EPA 200.7	05/29/20 15:58	KSL	
Lead	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Manganese	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Mercury	ND	0.20	ug/L	EPA 200.8	05/29/20 16:11	KRV	N_HTa
				ATP			
Molybdenum	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	NLOhND
Nickel	ND	20	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Selenium	ND	5.0	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Silver	ND	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Thallium	ND	200	ug/L	EPA 200.8	05/29/20 16:11	KRV	
Vanadium	28	10	ug/L	EPA 200.8	06/02/20 15:08	KRV	
Zinc	20	10	ug/L	EPA 200.8	05/29/20 16:11	KRV	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Laboratory Reference Number

C0E1012-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Colorado River Water Background	Liquid	03/04/20 00:00	05/08/20 11:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015							
DRO (C10-C28)	ND	5.0	mg/L	EPA 8015B	05/29/20 23:06	NAA	N_HTr
ORO (C29-C44)	ND	5.0	mg/L	EPA 8015B	05/29/20 23:06	NAA	N_HTr
Surrogate: o-Terphenyl	79%	49-114		EPA 8015B	05/29/20 23:06	NAA	N_HTr
Surrogate: n-Triacontane	40%	10-122		EPA 8015B	05/29/20 23:06	NAA	N_HTr
Gasoline Range Organics by EPA 8015							
Gasoline Range Organics	ND	0.050	mg/L	EPA 8015B	05/29/20 21:56	JES	N_HTr
Surrogate: a,a,a-Trifluorotoluene	100%	64-120		EPA 8015B	05/29/20 21:56	JES	N_HTr



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Cations - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK1)				Prepared & Analyzed: 05/29/20						
Calcium	ND	1.0	mg/L							
Magnesium	ND	1.0	mg/L							
Sodium	ND	1.0	mg/L							
Potassium	ND	1.0	mg/L							
Blank (0E29050-BLK2)				Prepared & Analyzed: 05/29/20						
Calcium	ND	1.0	mg/L							
Magnesium	ND	1.0	mg/L							
Sodium	ND	1.0	mg/L							
Potassium	ND	1.0	mg/L							
LCS (0E29050-BS1)				Prepared & Analyzed: 05/29/20						
Calcium	17.5	1.0	mg/L	17.0		103	85-115			
Magnesium	17.0	1.0	mg/L	17.0		100	85-115			
Sodium	33.3	1.0	mg/L	33.7		99	85-115			
Potassium	16.9	1.0	mg/L	17.0		99	85-115			
Matrix Spike (0E29050-MS1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Calcium	23.8	1.0	mg/L	17.0	5.48	108	70-130			
Magnesium	18.1	1.0	mg/L	17.0	0.878	101	70-130			
Sodium	36.4	1.0	mg/L	33.7	2.56	100	70-130			
Potassium	18.9	1.0	mg/L	17.0	1.61	102	70-130			
Matrix Spike Dup (0E29050-MSD1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Calcium	23.0	1.0	mg/L	17.0	5.48	103	70-130	3	20	
Magnesium	17.6	1.0	mg/L	17.0	0.878	98	70-130	3	20	
Sodium	35.4	1.0	mg/L	33.7	2.56	97	70-130	3	20	
Potassium	18.3	1.0	mg/L	17.0	1.61	98	70-130	3	20	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E28127 - Analyzed as Received IC										
Blank (0E28127-BLK1)				Prepared & Analyzed: 05/29/20						
Sulfate	ND	0.50	mg/L							
Chloride	ND	1.0	mg/L							
Nitrate as N	ND	0.20	mg/L							
LCS (0E28127-BS1)				Prepared & Analyzed: 05/29/20						
Sulfate	25.3	0.50	mg/L	25.0		101	90-110			
Chloride	26.4	1.0	mg/L	25.0		105	90-110			
Nitrate as N	5.71	0.20	mg/L	5.65		101	90-110			
Matrix Spike (0E28127-MS1)				Source: C0D3709-14		Prepared & Analyzed: 05/29/20				
Sulfate	24.8	0.50	mg/L	25.0	ND	99	75-128			
Chloride	25.4	1.0	mg/L	25.0	ND	101	84-129			
Nitrate as N	5.53	0.20	mg/L	5.65	ND	98	75-131			
Matrix Spike (0E28127-MS2)				Source: C0E1012-07		Prepared & Analyzed: 05/29/20				
Sulfate	236	0.50	mg/L	25.0	212	97	75-128			
Chloride	115	1.0	mg/L	25.0	89.1	102	84-129			
Nitrate as N	5.94	0.20	mg/L	5.65	0.206	101	75-131			
Matrix Spike Dup (0E28127-MSD1)				Source: C0D3709-14		Prepared & Analyzed: 05/29/20				
Sulfate	24.7	0.50	mg/L	25.0	ND	99	75-128	0.2	20	
Chloride	25.3	1.0	mg/L	25.0	ND	101	84-129	0.2	20	
Nitrate as N	5.54	0.20	mg/L	5.65	ND	98	75-131	0.09	20	
Batch 0E29016 - Analyzed as received										
Blank (0E29016-BLK1)				Prepared & Analyzed: 05/29/20						
Total Alkalinity	ND	5.0	mg/L as CaCO ₃							
Hydroxide	ND	5.0	mg/L as CaCO ₃							
Carbonate	ND	5.0	mg/L as CaCO ₃							
Bicarbonate	ND	5.0	mg/L as CaCO ₃							



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29016 - Analyzed as received										
LCS (0E29016-BS3)				Prepared & Analyzed: 05/29/20						
Total Alkalinity	1280	5.0	mg/L as CaCO ₃	1250		102	90-110			
Carbonate	1250	5.0	mg/L as CaCO ₃	1250		100	90-110			
Duplicate (0E29016-DUP1)				Source: C0E1012-03 Prepared & Analyzed: 05/29/20						
Total Alkalinity	137	5.0	mg/L as CaCO ₃		139			1	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	135	5.0	mg/L as CaCO ₃		139			3	20	
Duplicate (0E29016-DUP2)				Source: C0E1012-04 Prepared & Analyzed: 05/29/20						
Total Alkalinity	136	5.0	mg/L as CaCO ₃		137			0.4	20	
Hydroxide	ND	5.0	mg/L as CaCO ₃		ND				20	
Carbonate	ND	5.0	mg/L as CaCO ₃		ND				20	
Bicarbonate	136	5.0	mg/L as CaCO ₃		137			0.4	20	
Batch 0F01100 - Analyzed as received										
Blank (0F01100-BLK1)				Prepared & Analyzed: 06/01/20						
Total Alkalinity	ND	5.0	mg/L as CaCO ₃							
Hydroxide	ND	5.0	mg/L as CaCO ₃							
Carbonate	ND	5.0	mg/L as CaCO ₃							
Bicarbonate	ND	5.0	mg/L as CaCO ₃							
LCS (0F01100-BS3)				Prepared & Analyzed: 06/01/20						
Total Alkalinity	1270	5.0	mg/L as CaCO ₃	1250		102	90-110			
Carbonate	1240	5.0	mg/L as CaCO ₃	1250		99	90-110			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01100 - Analyzed as received										
Duplicate (0F01100-DUP1)		Source: C0E3072-04			Prepared & Analyzed: 06/01/20					
Total Alkalinity	178	5.0	mg/L as CaCO3		181			2	20	
Hydroxide	ND	5.0	mg/L as CaCO3		ND				20	
Carbonate	ND	5.0	mg/L as CaCO3		ND				20	
Bicarbonate	178	5.0	mg/L as CaCO3		181			2	20	
Duplicate (0F01100-DUP2)		Source: C0E3072-05			Prepared & Analyzed: 06/01/20					
Total Alkalinity	178	5.0	mg/L as CaCO3		179			0.9	20	
Hydroxide	ND	5.0	mg/L as CaCO3		ND				20	
Carbonate	ND	5.0	mg/L as CaCO3		ND				20	
Bicarbonate	178	5.0	mg/L as CaCO3		179			0.9	20	
Batch 0F01102 - Analyzed as received										
Blank (0F01102-BLK1)		Prepared & Analyzed: 06/01/20								
Fluoride	ND	0.1	mg/L							
LCS (0F01102-BS1)		Prepared & Analyzed: 06/01/20								
Fluoride	0.788	0.1	mg/L	0.800		98	90-110			
LCS (0F01102-BS2)		Prepared & Analyzed: 06/01/20								
Fluoride	0.763	0.1	mg/L	0.800		95	90-110			
LCS (0F01102-BS3)		Prepared & Analyzed: 06/01/20								
Fluoride	0.754	0.1	mg/L	0.800		94	90-110			
LCS (0F01102-BS4)		Prepared & Analyzed: 06/01/20								
Fluoride	0.763	0.1	mg/L	0.800		95	90-110			



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01102 - Analyzed as received										
Matrix Spike (0F01102-MS1)		Source: C0E3251-01			Prepared & Analyzed: 06/01/20					
Fluoride	0.485	0.1	mg/L	0.400	0.104	95	75-125			
Matrix Spike Dup (0F01102-MSD1)		Source: C0E3251-01			Prepared & Analyzed: 06/01/20					
Fluoride	0.489	0.1	mg/L	0.400	0.104	96	75-125	0.8	20	



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Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Aggregate Properties - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29016 - Analyzed as received										
LCS (0E29016-BS1)				Prepared & Analyzed: 05/29/20						
pH	7.0	1.0	pH Units	7.00		100	97.5-102.5			
LCS (0E29016-BS2)				Prepared & Analyzed: 05/29/20						
Specific Conductance	992	1.0	umhos/cm	1000		99	90-110			
Duplicate (0E29016-DUP1)				Source: C0E1012-03		Prepared & Analyzed: 05/29/20				
pH	8.3	1.0	pH Units		8.2			1	5	
Specific Conductance	945	1.0	umhos/cm		932			1	20	
Duplicate (0E29016-DUP2)				Source: C0E1012-04		Prepared & Analyzed: 05/29/20				
pH	8.3	1.0	pH Units		8.2			0.7	5	
Specific Conductance	917	1.0	umhos/cm		928			1	20	
Batch 0F01100 - Analyzed as received										
LCS (0F01100-BS1)				Prepared & Analyzed: 06/01/20						
pH	7.0	1.0	pH Units	7.00		101	97.5-102.5			
LCS (0F01100-BS2)				Prepared & Analyzed: 06/01/20						
Specific Conductance	990	1.0	umhos/cm	1000		99	90-110			
Duplicate (0F01100-DUP1)				Source: C0E3072-04		Prepared & Analyzed: 06/01/20				
pH	7.9	1.0	pH Units		7.9			0.1	5	
Specific Conductance	563	1.0	umhos/cm		566			0.5	20	
Duplicate (0F01100-DUP2)				Source: C0E3072-05		Prepared & Analyzed: 06/01/20				
pH	7.9	1.0	pH Units		7.9			0.1	5	
Specific Conductance	567	1.0	umhos/cm		567			0	20	



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Project Name: Whitewater Project 2020
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Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01104 - Analyzed as received										
Blank (0F01104-BLK1)				Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	ND	10	mg/L							
Duplicate (0F01104-DUP1)				Source: C0E3044-01 Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	1400	20	mg/L		1400			0	20	
Duplicate (0F01104-DUP2)				Source: C0E3405-01 Prepared & Analyzed: 06/01/20						
Total Dissolved Solids	323	10	mg/L		331			2	20	



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 Project Name: Whitewater Project 2020
 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
 Received on Ice (Y/N): Yes Temp: 6 °C

Aggregate Organic Compounds - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29036 - As recieved										
Blank (0E29036-BLK1)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	ND	0.70	mg/L							
Blank (0E29036-BLK2)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	ND	0.70	mg/L							
LCS (0E29036-BS1)				Prepared & Analyzed: 05/29/20						
Total Organic Carbon	3.92	0.70	mg/L	4.00		98	90-110			
Duplicate (0E29036-DUP1)				Source: C0E1012-06 Prepared & Analyzed: 05/29/20						
Total Organic Carbon	2.32	0.70	mg/L		2.29			1	20	
Matrix Spike (0E29036-MS1)				Source: C0E1012-07 Prepared & Analyzed: 05/29/20						
Total Organic Carbon	6.52	0.70	mg/L	4.00	2.42	103	80-120			
Matrix Spike Dup (0E29036-MSD1)				Source: C0E1012-07 Prepared & Analyzed: 05/29/20						
Total Organic Carbon	6.55	0.70	mg/L	4.00	2.42	103	80-120	0.4	10	



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 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
 Received on Ice (Y/N): Yes Temp: 6 °C

Surfactants - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29012 - Solvent Extraction.										
Blank (0E29012-BLK1)				Prepared & Analyzed: 05/29/20						
MBAS	ND	0.08	mg/L							
LCS (0E29012-BS1)				Prepared & Analyzed: 05/29/20						
MBAS	0.180	0.08	mg/L	0.400		45	26-137			
Matrix Spike (0E29012-MS1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
MBAS	0.270	0.20	mg/L	0.500	ND	54	19-140			
Matrix Spike Dup (0E29012-MSD1)				Source: C0D3709-14 Prepared & Analyzed: 05/29/20						
MBAS	0.219	0.20	mg/L	0.500	ND	44	19-140	21	30	



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Report Date: 09-Jun-2020

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Received on Ice (Y/N): Yes Temp: 6 °C

Nutrients - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29025 - Acid Digest										
LCS (0E29025-BS1)				Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.536	0.05	mg/L	0.500		107	85-115			
Matrix Spike (0E29025-MS1)				Source: C0E2358-04 Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.571	0.05	mg/L	0.500	0.0546	103	80-120			
Matrix Spike Dup (0E29025-MSD1)				Source: C0E2358-04 Prepared & Analyzed: 05/29/20						
Total Phosphorus	0.565	0.05	mg/L	0.500	0.0546	102	80-120	1	20	



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Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
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Batch 0E29031 - EPA 200.2

Blank (0E29031-BLK1)

Prepared & Analyzed: 05/29/20

Antimony	ND	10	ug/L
Arsenic	ND	5.0	ug/L
Barium	ND	20	ug/L
Beryllium	ND	10	ug/L
Cadmium	ND	2.0	ug/L
Total Chromium	ND	20	ug/L
Cobalt	ND	10	ug/L
Copper	ND	10	ug/L
Lead	ND	10	ug/L
Manganese	ND	10	ug/L
Mercury	ND	0.20	ug/L
Molybdenum	ND	10	ug/L
Nickel	ND	20	ug/L
Selenium	ND	5.0	ug/L
Silver	ND	10	ug/L
Thallium	ND	200	ug/L
Zinc	ND	10	ug/L

Blank (0E29031-BLK2)

Prepared & Analyzed: 05/29/20

Antimony	ND	10	ug/L
Arsenic	ND	5.0	ug/L
Barium	ND	20	ug/L
Beryllium	ND	10	ug/L
Cadmium	ND	2.0	ug/L
Total Chromium	ND	20	ug/L
Cobalt	ND	10	ug/L
Copper	ND	10	ug/L
Lead	ND	10	ug/L
Manganese	ND	10	ug/L
Mercury	ND	0.20	ug/L
Molybdenum	ND	10	ug/L
Nickel	ND	20	ug/L
Selenium	ND	5.0	ug/L
Silver	ND	10	ug/L
Thallium	ND	200	ug/L

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Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29031 - EPA 200.2										
Blank (0E29031-BLK2)				Prepared & Analyzed: 05/29/20						
Zinc	ND	10	ug/L							
LCS (0E29031-BS1)				Prepared & Analyzed: 05/29/20						
Antimony	344	10	ug/L	332		103	85-115			
Arsenic	340	5.0	ug/L	332		102	85-115			
Barium	340	20	ug/L	332		102	85-115			
Beryllium	330	10	ug/L	332		99	85-115			
Cadmium	336	2.0	ug/L	332		101	85-115			
Total Chromium	343	20	ug/L	332		103	85-115			
Cobalt	337	10	ug/L	332		101	85-115			
Copper	336	10	ug/L	332		101	85-115			
Lead	334	10	ug/L	332		100	85-115			
Manganese	340	10	ug/L	332		102	85-115			
Mercury	2.98	0.20	ug/L	2.79		107	85-115			
Molybdenum	389	10	ug/L	332		117	85-115			QLout
Nickel	333	20	ug/L	332		100	85-115			
Selenium	328	5.0	ug/L	332		99	85-115			
Silver	49.1	10	ug/L	50.1		98	85-115			
Thallium	336	200	ug/L	332		101	85-115			
Zinc	339	10	ug/L	332		102	85-115			
Matrix Spike (0E29031-MS1)				Source: C0D3709-06 Prepared & Analyzed: 05/29/20						
Antimony	339	20	ug/L	332	ND	102	70-130			
Arsenic	354	10	ug/L	332	4.97	105	70-130			
Barium	349	40	ug/L	332	4.26	104	70-130			
Beryllium	352	20	ug/L	332	ND	106	70-130			
Cadmium	343	4.0	ug/L	332	ND	103	70-130			
Total Chromium	363	40	ug/L	332	0.983	109	70-130			
Cobalt	358	20	ug/L	332	ND	108	70-130			
Copper	336	20	ug/L	332	ND	101	70-130			
Lead	338	20	ug/L	332	ND	102	70-130			
Manganese	356	20	ug/L	332	ND	107	70-130			
Mercury	2.96	0.40	ug/L	2.79	ND	106	70-130			
Molybdenum	355	20	ug/L	332	ND	107	70-130			
Nickel	348	40	ug/L	332	ND	105	70-130			
Selenium	340	10	ug/L	332	ND	102	70-130			

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Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29031 - EPA 200.2										
Matrix Spike (0E29031-MS1)		Source: C0D3709-06			Prepared & Analyzed: 05/29/20					
Silver	51.5	20	ug/L	50.1	ND	103	70-130			
Thallium	344	400	ug/L	332	ND	104	70-130			
Zinc	351	20	ug/L	332	ND	106	70-130			
Matrix Spike Dup (0E29031-MSD1)		Source: C0D3709-06			Prepared & Analyzed: 05/29/20					
Antimony	337	20	ug/L	332	ND	101	70-130	0.5	20	
Arsenic	347	10	ug/L	332	4.87	103	70-130	2	20	
Barium	341	40	ug/L	332	4.26	101	70-130	2	20	
Beryllium	338	20	ug/L	332	ND	102	70-130	4	20	
Cadmium	344	4.0	ug/L	332	ND	103	70-130	0.05	20	
Total Chromium	354	40	ug/L	332	0.983	106	70-130	2	20	
Cobalt	354	20	ug/L	332	ND	107	70-130	1	20	
Copper	339	20	ug/L	332	ND	102	70-130	0.9	20	
Lead	328	20	ug/L	332	ND	99	70-130	3	20	
Manganese	345	20	ug/L	332	ND	104	70-130	3	20	
Mercury	2.83	0.40	ug/L	2.79	ND	101	70-130	4	20	
Molybdenum	355	20	ug/L	332	ND	107	70-130	0.1	20	
Nickel	346	40	ug/L	332	ND	104	70-130	0.7	20	
Selenium	331	10	ug/L	332	ND	100	70-130	3	20	
Silver	50.9	20	ug/L	50.1	ND	102	70-130	1	20	
Thallium	344	400	ug/L	332	ND	103	70-130	0.01	20	
Zinc	345	20	ug/L	332	ND	104	70-130	2	20	
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK1)		Prepared & Analyzed: 05/29/20								
Aluminum	ND	100	ug/L							
Iron	ND	50	ug/L							



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Received on Ice (Y/N): Yes Temp: 6 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29050 - EPA 200.2										
Blank (0E29050-BLK2)				Prepared & Analyzed: 05/29/20						
Aluminum	ND	100	ug/L							
Iron	ND	50	ug/L							
LCS (0E29050-BS1)				Prepared & Analyzed: 05/29/20						
Aluminum	1140	100	ug/L	1170		97	85-115			
Iron	1240	50	ug/L	1170		106	85-115			
Matrix Spike (0E29050-MS1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Aluminum	1400	100	ug/L	1170	245	99	70-130			
Iron	1290	50	ug/L	1170	5.88	110	70-130			
Matrix Spike Dup (0E29050-MSD1)				Source: C0D3709-06		Prepared & Analyzed: 05/29/20				
Aluminum	1370	100	ug/L	1170	245	96	70-130	2	20	
Iron	1250	50	ug/L	1170	5.88	107	70-130	3	20	
Batch 0F01103 - EPA 200.2										
Blank (0F01103-BLK1)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	ND	10	ug/L							
Blank (0F01103-BLK2)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	ND	10	ug/L							
LCS (0F01103-BS1)				Prepared: 06/01/20 Analyzed: 06/02/20						
Vanadium	350	10	ug/L	332		105	85-115			
Matrix Spike (0F01103-MS1)				Source: C0E2737-01		Prepared: 06/01/20 Analyzed: 06/02/20				
Vanadium	417	20	ug/L	332	61.1	107	70-130			



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Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01103 - EPA 200.2										
Matrix Spike Dup (0F01103-MSD1)		Source: C0E2737-01			Prepared: 06/01/20 Analyzed: 06/02/20					
Vanadium	405	20	ug/L	332	61.1	103	70-130	3	20	



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Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29039 - Solvent Extraction										
Blank (0E29039-BLK1)				Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	ND	5.0	mg/L							
ORO (C29-C44)	ND	5.0	mg/L							
Surrogate: o-Terphenyl	1.7		mg/L	2.14		78	49-114			
Surrogate: n-Triacontane	1.3		mg/L	3.14		40	10-122			
LCS (0E29039-BS1)				Prepared & Analyzed: 05/29/20						
DRO (C10-C28)	23.2	5.0	mg/L	28.6		81	45-122			
ORO (C29-C44)	24.9	5.0	mg/L	28.6		87	34-126			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		83	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			
Matrix Spike (0E29039-MS1)				Source: C0D3709-02		Prepared & Analyzed: 05/29/20				
DRO (C10-C28)	23.2	5.0	mg/L	28.6	ND	81	23-133			
ORO (C29-C44)	25.3	5.0	mg/L	28.6	ND	88	22-118			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		82	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		43	10-122			
Matrix Spike Dup (0E29039-MSD1)				Source: C0D3709-02		Prepared & Analyzed: 05/29/20				
DRO (C10-C28)	23.1	5.0	mg/L	28.6	ND	81	23-133	0.2	40	
ORO (C29-C44)	24.8	5.0	mg/L	28.6	ND	87	22-118	2	40	
Surrogate: o-Terphenyl	1.8		mg/L	2.14		83	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		43	10-122			
Batch 0F01108 - Solvent Extraction										
Blank (0F01108-BLK1)				Prepared & Analyzed: 06/01/20						
DRO (C10-C28)	ND	5.0	mg/L							
ORO (C29-C44)	ND	5.0	mg/L							
Surrogate: o-Terphenyl	1.8		mg/L	2.14		82	49-114			
Surrogate: n-Triacontane	1.3		mg/L	3.14		41	10-122			



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 Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
 Received on Ice (Y/N): Yes Temp: 6 °C

Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01108 - Solvent Extraction										
LCS (0F01108-BS1)				Prepared & Analyzed: 06/01/20						
DRO (C10-C28)	24.2	5.0	mg/L	28.6		85	45-122			
ORO (C29-C44)	23.9	5.0	mg/L	28.6		83	34-126			
Surrogate: o-Terphenyl	1.8		mg/L	2.14		84	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			
Matrix Spike (0F01108-MS1)				Source: C0D3709-06		Prepared & Analyzed: 06/01/20				
DRO (C10-C28)	24.1	5.0	mg/L	28.6	ND	84	23-133			
ORO (C29-C44)	24.2	5.0	mg/L	28.6	ND	85	22-118			
Surrogate: o-Terphenyl	1.9		mg/L	2.14		87	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			
Matrix Spike Dup (0F01108-MSD1)				Source: C0D3709-06		Prepared & Analyzed: 06/01/20				
DRO (C10-C28)	24.1	5.0	mg/L	28.6	ND	84	23-133	0.2	40	
ORO (C29-C44)	24.0	5.0	mg/L	28.6	ND	84	22-118	0.5	40	
Surrogate: o-Terphenyl	1.8		mg/L	2.14		84	49-114			
Surrogate: n-Triacontane	1.4		mg/L	3.14		44	10-122			



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Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0E29042 - Purge and Trap										
Blank (0E29042-BLK1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	ND	0.050	mg/L							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.42		mg/L	0.500		85	64-120			
LCS (0E29042-BS1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	2.27	0.050	mg/L	2.32		98	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.46		mg/L	0.500		92	64-120			
LCS Dup (0E29042-BSD1)				Prepared & Analyzed: 05/29/20						
Gasoline Range Organics	2.14	0.050	mg/L	2.32		92	70-130	6	40	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.48		mg/L	0.500		97	64-120			
Matrix Spike (0E29042-MS1)				Source: C0D3709-02		Prepared & Analyzed: 05/29/20				
Gasoline Range Organics	2.75	0.050	mg/L	2.50	ND	110	70-151			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.46		mg/L	0.500		92	64-120			
Matrix Spike Dup (0E29042-MSD1)				Source: C0D3709-02		Prepared & Analyzed: 05/29/20				
Gasoline Range Organics	2.46	0.050	mg/L	2.50	ND	98	70-151	11	40	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.49		mg/L	0.500		98	64-120			
Batch 0F01106 - Purge and Trap										
Blank (0F01106-BLK1)				Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	ND	0.050	mg/L							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.40		mg/L	0.500		81	64-120			
LCS (0F01106-BS1)				Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	2.08	0.050	mg/L	2.32		90	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.45		mg/L	0.500		89	64-120			



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Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 0F01106 - Purge and Trap										
LCS Dup (0F01106-BSD1)				Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	1.96	0.050	mg/L	2.32		85	70-130	6	40	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.46		mg/L	0.500		92	64-120			
Matrix Spike (0F01106-MS1)				Source: C0E1012-01 Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	2.20	0.050	mg/L	2.50	ND	88	70-151			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.44		mg/L	0.500		88	64-120			
Matrix Spike Dup (0F01106-MSD1)				Source: C0E1012-01 Prepared & Analyzed: 06/01/20						
Gasoline Range Organics	2.31	0.050	mg/L	2.50	ND	92	70-151	5	40	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.46		mg/L	0.500		92	64-120			



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Santa Ana, CA 92705

Analytical Report: Page 45 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Notes and Definitions

pH:	Regulatory 15 minute holding time exceeded	C0E1012-01
pH:	Regulatory 15 minute holding time exceeded	C0E1012-02
pH:	Regulatory 15 minute holding time exceeded	C0E1012-03
pH:	Regulatory 15 minute holding time exceeded	C0E1012-04
pH:	Regulatory 15 minute holding time exceeded	C0E1012-05
pH:	Regulatory 15 minute holding time exceeded	C0E1012-06
pH:	Regulatory 15 minute holding time exceeded	C0E1012-07
pH:	Regulatory 15 minute holding time exceeded	C0E1012-09

N_HTa Sample analyzed outside of the EPA recommended holding time.

N_HTp Analysis requested near or past holding time. Sample analyzed outside of the EPA recommended holding time.

N_HTr Sample received past regulatory holding time.

NLOhND LCS recovery was above method control limit for this analyte. Analyte not detected, therefore data not impacted.

QLout The LCS and/or LCSD recovery did not meet laboratory acceptance criteria.

Qraw Based on raw data excluding numerical rounding, QC recovery was within laboratory acceptance criteria.

ND: Analyte NOT DETECTED at or above the Method Detection Limit (**if MDL is reported**), otherwise at or above the Reportable Detection Limit (RDL)

NR: Not Reported

RDL: Reportable Detection Limit

MDL: Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 46 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

This report applies only to the sample(s) analyzed. As a mutual protection to clients, the public, and Babcock Laboratories, Inc., this report is submitted and accepted for the exclusive use of the Client to whom it is addressed. Interpretation and use of the information contained within this report are the sole responsibility of the Client. Babcock Laboratories, Inc. is not responsible for any misinformation or consequences that may result from misinterpretation or improper use of this report. This report is not to be modified or abbreviated in any way. Additionally, this report is not to be used, in whole or in part, in any advertising or publicity matter without written authorization from Babcock Laboratories, Inc. The liability of Babcock Laboratories, Inc. is limited to the actual cost of the requested analyses, unless otherwise agreed upon in writing. There is no other warranty expressed or implied.

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EPANo. CA00102
NELAP No. OR4035
LACSD No. 10119



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 47 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C



5100 Quail Valley Court Riverside, CA 92507
(951) 653-3351 • FAX (951) 653-1662
www.babcocklabs.com

Chain of Custody & Sample Information Record

Client: <u>Todd Chapman</u>		Contact: <u>Todd Chapman</u>		Fax No:		Address/Reporting Location:	
Phone No: <u>951-281-2445</u>		Email: <u>tcham@ecorp.com</u>		Turn Around Time: <u>Routine</u>		*22 Hour Rush *48 Hour Rush *72 Hour Rush	
Project Name: <u>Whitewater Project 2020</u>		*Lab TAT Approval:		B:		*Additional Charges Apply	
Project Location: <u>Whitewater River</u>		*Lab TAT Approval:		B:		*Additional Charges Apply	
Sampler Information		= of Containers & Preservatives		Sample Type		Analysis Requested	
Name: <u>Todd Chapman</u>		Unpreserved		Routine		Matrix	
Employer: <u>ECORP Consulting, Inc.</u>		Hydro- HCl		Residue		DW = Drinking Water	
Signature: <u>Todd Chapman</u>		HNO ₃ NaOH		Sporadic		WW = Waste Water	
Sample ID		HNO ₃ NaOH		Total # of Containers		EW = Effluent Water	
Date		HNO ₃ NaOH		B:		S = Solid	
Time		HNO ₃ NaOH		B:		SL = Sludge	
Sample 1		HNO ₃ NaOH		B:		L = Liquid	
Sample 2		HNO ₃ NaOH		B:		M = Metabolites	
Sample 3		HNO ₃ NaOH		B:		Notes	
Sample 4		HNO ₃ NaOH		B:		after 1st composite	
Sample 5		HNO ₃ NaOH		B:		Acidic 3	
Sample 6		HNO ₃ NaOH		B:		Samples for	
Sample 7		HNO ₃ NaOH		B:		each site	
Sample 8		HNO ₃ NaOH		B:		- Solid	
Sample 9		HNO ₃ NaOH		B:		- leachate/TOT	
Sample 10		HNO ₃ NaOH		B:		- leachate/TOT	
Sample 11		HNO ₃ NaOH		B:		Citations	
Sample 12		HNO ₃ NaOH		B:		Notes	
Sample 13		HNO ₃ NaOH		B:		Notes	
Sample 14		HNO ₃ NaOH		B:		Notes	
Sample 15		HNO ₃ NaOH		B:		Notes	
Sample 16		HNO ₃ NaOH		B:		Notes	
Sample 17		HNO ₃ NaOH		B:		Notes	
Sample 18		HNO ₃ NaOH		B:		Notes	
Sample 19		HNO ₃ NaOH		B:		Notes	
Sample 20		HNO ₃ NaOH		B:		Notes	
Sample 21		HNO ₃ NaOH		B:		Notes	
Sample 22		HNO ₃ NaOH		B:		Notes	
Sample 23		HNO ₃ NaOH		B:		Notes	
Sample 24		HNO ₃ NaOH		B:		Notes	
Sample 25		HNO ₃ NaOH		B:		Notes	
Sample 26		HNO ₃ NaOH		B:		Notes	
Sample 27		HNO ₃ NaOH		B:		Notes	
Sample 28		HNO ₃ NaOH		B:		Notes	
Sample 29		HNO ₃ NaOH		B:		Notes	
Sample 30		HNO ₃ NaOH		B:		Notes	
Sample 31		HNO ₃ NaOH		B:		Notes	
Sample 32		HNO ₃ NaOH		B:		Notes	
Sample 33		HNO ₃ NaOH		B:		Notes	
Sample 34		HNO ₃ NaOH		B:		Notes	
Sample 35		HNO ₃ NaOH		B:		Notes	
Sample 36		HNO ₃ NaOH		B:		Notes	
Sample 37		HNO ₃ NaOH		B:		Notes	
Sample 38		HNO ₃ NaOH		B:		Notes	
Sample 39		HNO ₃ NaOH		B:		Notes	
Sample 40		HNO ₃ NaOH		B:		Notes	
Sample 41		HNO ₃ NaOH		B:		Notes	
Sample 42		HNO ₃ NaOH		B:		Notes	
Sample 43		HNO ₃ NaOH		B:		Notes	
Sample 44		HNO ₃ NaOH		B:		Notes	
Sample 45		HNO ₃ NaOH		B:		Notes	
Sample 46		HNO ₃ NaOH		B:		Notes	
Sample 47		HNO ₃ NaOH		B:		Notes	
Sample 48		HNO ₃ NaOH		B:		Notes	
Sample 49		HNO ₃ NaOH		B:		Notes	
Sample 50		HNO ₃ NaOH		B:		Notes	
Sample 51		HNO ₃ NaOH		B:		Notes	
Sample 52		HNO ₃ NaOH		B:		Notes	
Sample 53		HNO ₃ NaOH		B:		Notes	
Sample 54		HNO ₃ NaOH		B:		Notes	
Sample 55		HNO ₃ NaOH		B:		Notes	
Sample 56		HNO ₃ NaOH		B:		Notes	
Sample 57		HNO ₃ NaOH		B:		Notes	
Sample 58		HNO ₃ NaOH		B:		Notes	
Sample 59		HNO ₃ NaOH		B:		Notes	
Sample 60		HNO ₃ NaOH		B:		Notes	
Sample 61		HNO ₃ NaOH		B:		Notes	
Sample 62		HNO ₃ NaOH		B:		Notes	
Sample 63		HNO ₃ NaOH		B:		Notes	
Sample 64		HNO ₃ NaOH		B:		Notes	
Sample 65		HNO ₃ NaOH		B:		Notes	
Sample 66		HNO ₃ NaOH		B:		Notes	
Sample 67		HNO ₃ NaOH		B:		Notes	
Sample 68		HNO ₃ NaOH		B:		Notes	
Sample 69		HNO ₃ NaOH		B:		Notes	
Sample 70		HNO ₃ NaOH		B:		Notes	
Sample 71		HNO ₃ NaOH		B:		Notes	
Sample 72		HNO ₃ NaOH		B:		Notes	
Sample 73		HNO ₃ NaOH		B:		Notes	
Sample 74		HNO ₃ NaOH		B:		Notes	
Sample 75		HNO ₃ NaOH		B:		Notes	
Sample 76		HNO ₃ NaOH		B:		Notes	
Sample 77		HNO ₃ NaOH		B:		Notes	
Sample 78		HNO ₃ NaOH		B:		Notes	
Sample 79		HNO ₃ NaOH		B:		Notes	
Sample 80		HNO ₃ NaOH		B:		Notes	
Sample 81		HNO ₃ NaOH		B:		Notes	
Sample 82		HNO ₃ NaOH		B:		Notes	
Sample 83		HNO ₃ NaOH		B:		Notes	
Sample 84		HNO ₃ NaOH		B:		Notes	
Sample 85		HNO ₃ NaOH		B:		Notes	
Sample 86		HNO ₃ NaOH		B:		Notes	
Sample 87		HNO ₃ NaOH		B:		Notes	
Sample 88		HNO ₃ NaOH		B:		Notes	
Sample 89		HNO ₃ NaOH		B:		Notes	
Sample 90		HNO ₃ NaOH		B:		Notes	
Sample 91		HNO ₃ NaOH		B:		Notes	
Sample 92		HNO ₃ NaOH		B:		Notes	
Sample 93		HNO ₃ NaOH		B:		Notes	
Sample 94		HNO ₃ NaOH		B:		Notes	
Sample 95		HNO ₃ NaOH		B:		Notes	
Sample 96		HNO ₃ NaOH		B:		Notes	
Sample 97		HNO ₃ NaOH		B:		Notes	
Sample 98		HNO ₃ NaOH		B:		Notes	
Sample 99		HNO ₃ NaOH		B:		Notes	
Sample 100		HNO ₃ NaOH		B:		Notes	

We warrant that the data generated and information on this chain of custody form were collected by the Babcock Laboratories, Inc. Service and Client.

Client Use Only

Sample Integrity (Yes/No) Retention (Yes/No)

Sample(s) Submitted on Ice? ☒ Yes ☐ No ☐ NA Sample Matrix Laboratory Accredited Criteria? ☒ Yes ☐ No ☐ NA
 Chain of Custody Intact? ☒ Yes ☐ No ☐ NA Preservation to Container? ☒ Yes ☐ No ☐ NA
 Sample(s) Initialed? ☒ Yes ☐ No ☐ NA Delivery Notes? ☒ Yes ☐ No ☐ NA
 Temperature: 16 °C ☒ Cooler Blank Signature/Date: [Signature]

C0E1012

Rc'd: 05/08/2020 11:05

AG





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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 48 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: **C0E1012**
Received on Ice (Y/N): Yes Temp: 6 °C

Project Information

Printed: 04/30/2020 1:25 pm

ECORP Consulting, Inc.

2861 Pullman Street
Santa Ana, CA 92705
Laboratory PM: Cindy A. Waddell

8303

Phone: (714) 648-0630
Fax: (714) 648-0935

Project Name: Whitewater Project 2020
Project Number: Soil Composites 2020
Client PM: Todd Chapman
Comments: Special Handling = Compositing samples at lab. Waste Extraction (WET) using DI water.

Invoice To: ECORP Consulting, Inc.
Invoice Bid: Soil Composites 2020
Invoice Manager: Todd Chapman

Analysis	Comment
Hardness Total-WW	
Fluoride	
Fe_ICP_WW	
Fe_ICP_SW	
EC	
8015-TPH-DRO/ORO	
8015-TPH-G	
Al_ICP_SW	
Al_ICP_WW	
Cl	
Ca_ICP_WW	
Metals CA17-SW	
Alkalinity	
K_ICP_WW	
SO4	
Solids-Total Diss	
Phos-Total	
TOC	
WET	
Special Handling	
NA_ICP_WW	
Metals CA17-WW	
Mg_ICP_WW	
MN_ICPMS_SW	
Mn_ICPMS_WW	
NBAS	
NDS-H	
pH	
Metals CA17-SW subanalyses:	
Co_ICPMS_SW	
Hg_CVAA_SW	
Cu_ICPMS_SW	
Cr_ICPMS_SW	
Co_ICPMS_SW	
Ag_ICPMS_SW	
As_ICPMS_SW	
Ba_ICPMS_SW	
Be_ICPMS_SW	
Tl_ICPMS_SW	
Se_ICPMS_SW	
Sb_ICPMS_SW	



Page 1 of 2

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CA ELAP No. 2698
EPANo. CA00102
NELAP No. OR4035
LACSD No. 10119



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Client Name: ECORP Consulting, Inc.
Contact: Todd Chapman
Address: 2861 Pullman Street
Santa Ana, CA 92705

Analytical Report: Page 49 of 49
Project Name: Whitewater Project 2020
Project Number: Whitewater River

Report Date: 09-Jun-2020

Work Order Number: C0E1012
Received on Ice (Y/N): Yes Temp: 6 °C

Project Information
(Continued)

Printed: 04/08/2020 1:25 pm

ECORP Consulting, Inc.
2861 Pullman Street
Santa Ana, CA 92705
Laboratory PM: Cindy A. Waddell

8303
Phone: (714) 648-0630
Fax: (714) 648-0935

Project Name: Whitewater Project 2020	Invoice To: ECORP Consulting, Inc.
Project Number: Soil Composites 2020	Invoice Bid: Soil Composites 2020
Client PM: Todd Chapman	Invoice Manager: Todd Chapman
Comments: Special Handling - Compositing samples at lab. Waste Extraction (WET) using DI water.	

Analysis	Comment
TAD	
V_ICPMS_SW	
ZN_ICPMS_SW	
Ni_ICPMS_SW	
Pb_ICPMS_SW	
MO_ICPMS_SW	
Metals CA17-WW subanalyses:	
Hg_ICPMS_WW	
Cu_ICPMS_WW	
Cr_ICPMS_WW	
Co_ICPMS_WW	
As_ICPMS_WW	
Ag_ICPMS_WW	
Cd_ICPMS_WW	
Ba_ICPMS_WW	
Be_ICPMS_WW	
Se_ICPMS_WW	
Tl_ICPMS_WW	
V_ICPMS_WW	
ZN_ICPMS_WW	
Sb_ICPMS_WW	
Mo_ICPMS_WW	
Ni_ICPMS_WW	
Pb_ICPMS_WW	

C0E1012

Re'd: 05/08/2020 11:05

/IG



Page 2 of 2

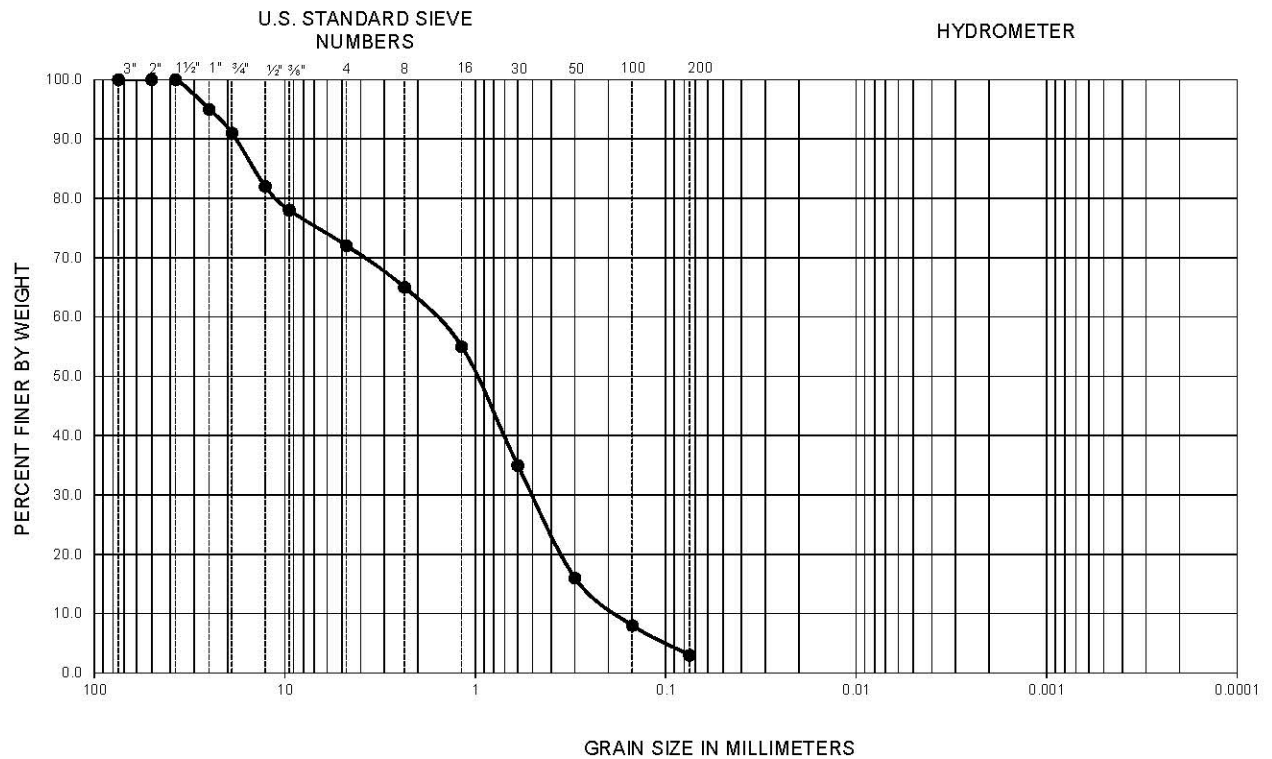
mailing
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location
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CA ELAP No. 2698
EPANo. CA00102
NELAP No. OR4035
LACSD No. 10119

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	Pond 1	0	--	--	--	0.18	0.50	1.54	8.6	0.9	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

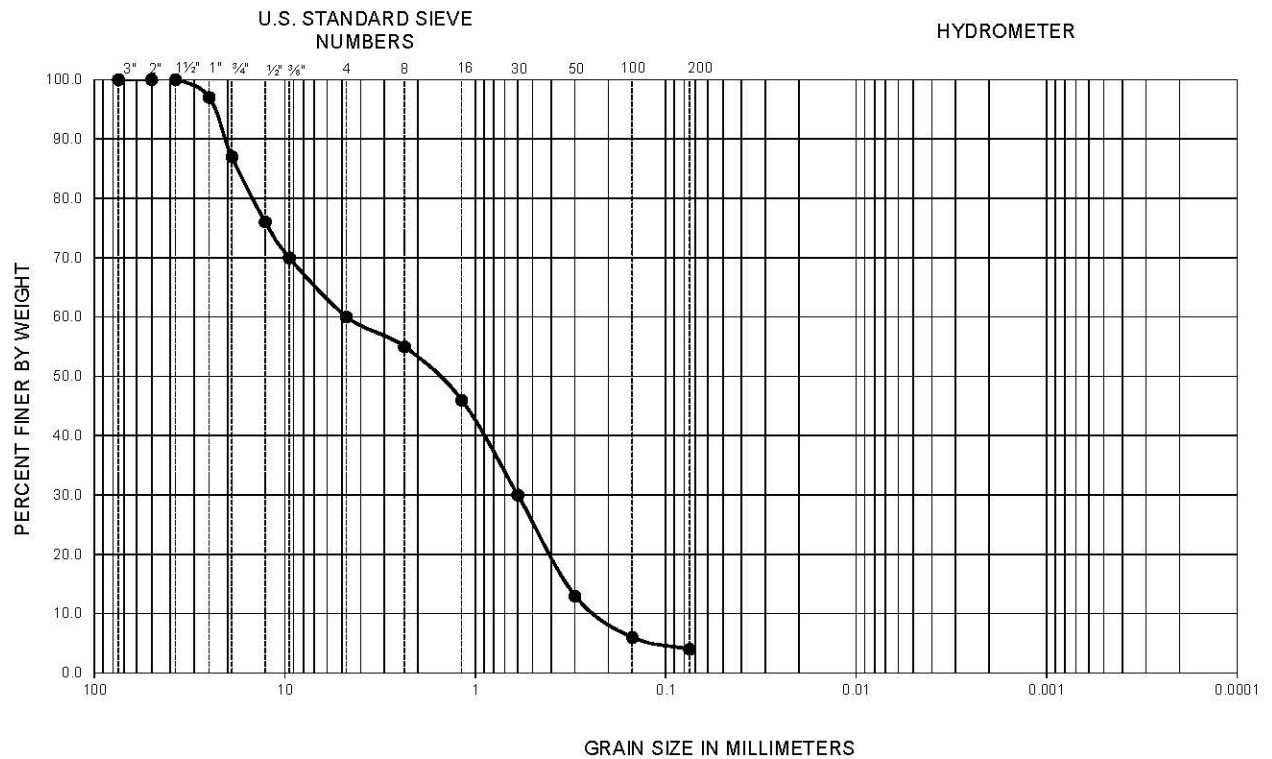
FIGURE B-1

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	Pond 2	0	--	--	--	0.24	0.60	4.75	20.1	0.3	4	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

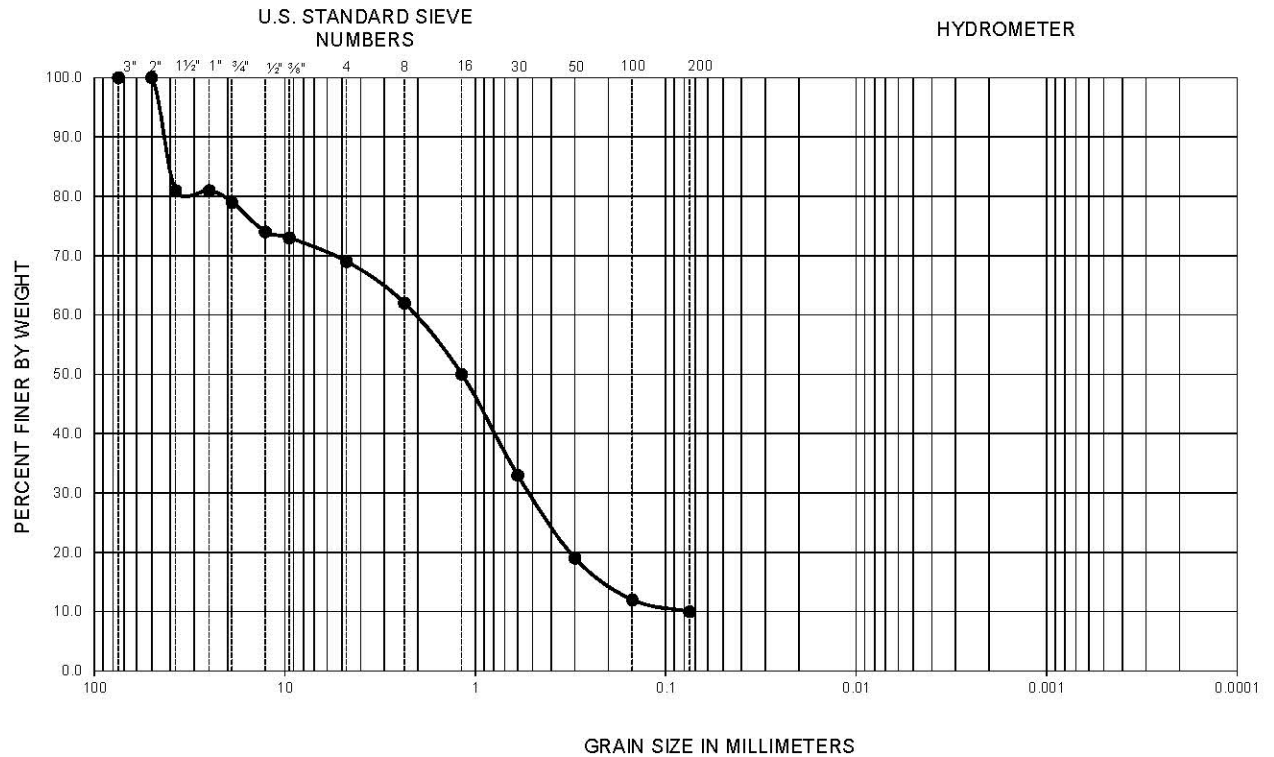
FIGURE B-2

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	Pond 12	0	--	--	--	0.08	0.52	2.03	27.1	1.8	10	SW-SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

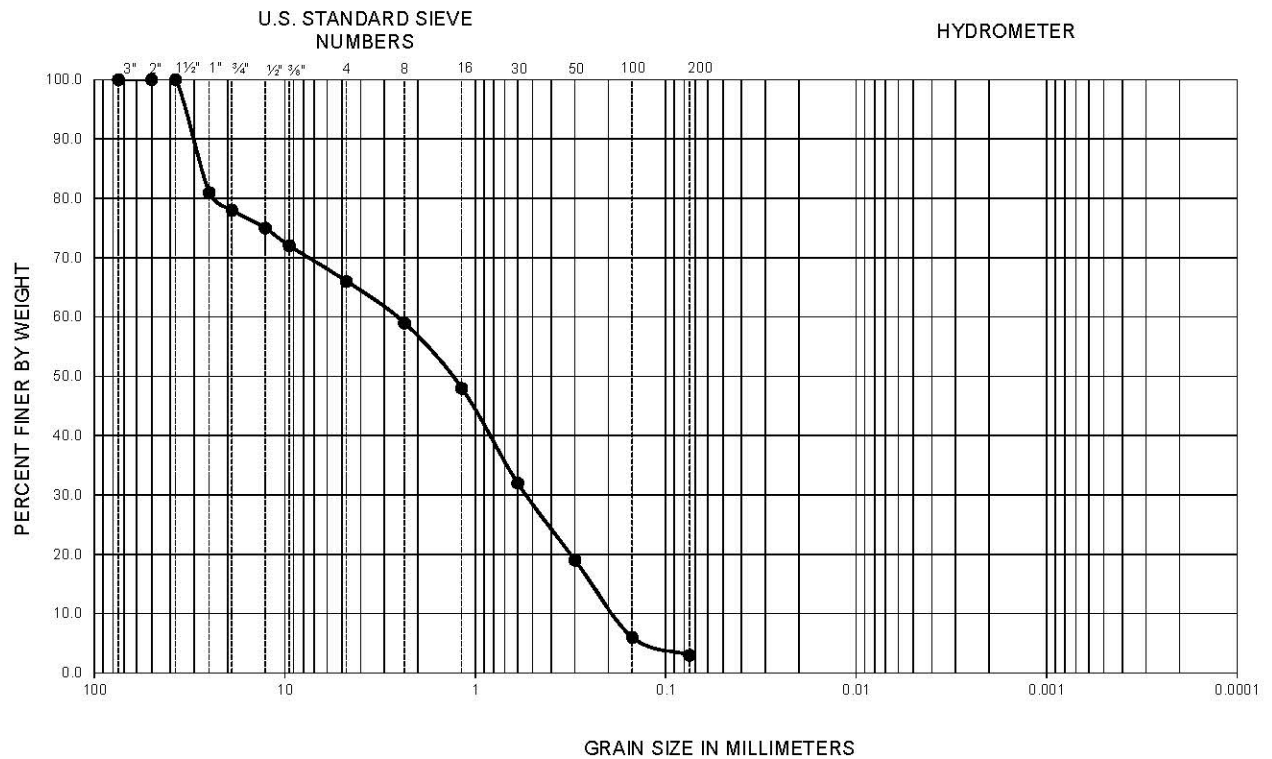
FIGURE B-4

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	Pond 14	0	--	--	--	0.19	0.54	2.50	13.2	0.6	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

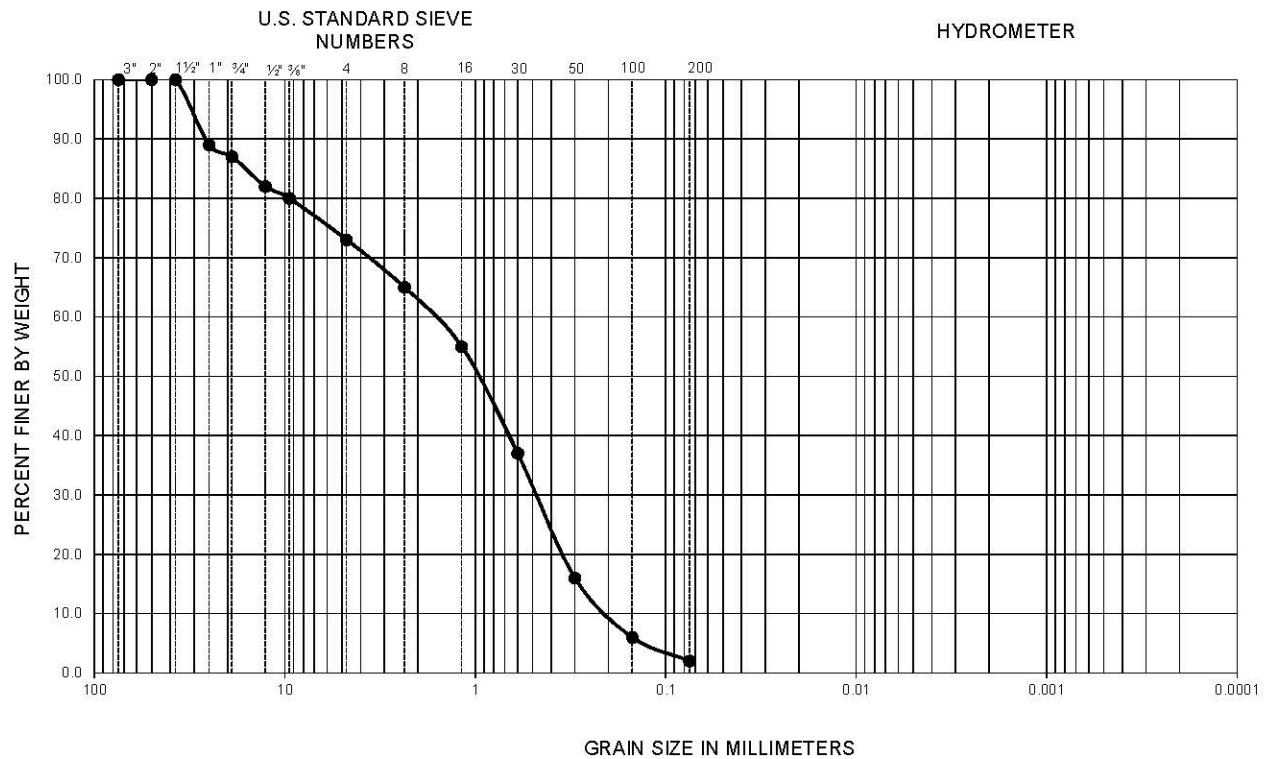
FIGURE B-5

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	Pond 19	0	--	--	--	0.21	0.48	1.60	7.6	0.7	2	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

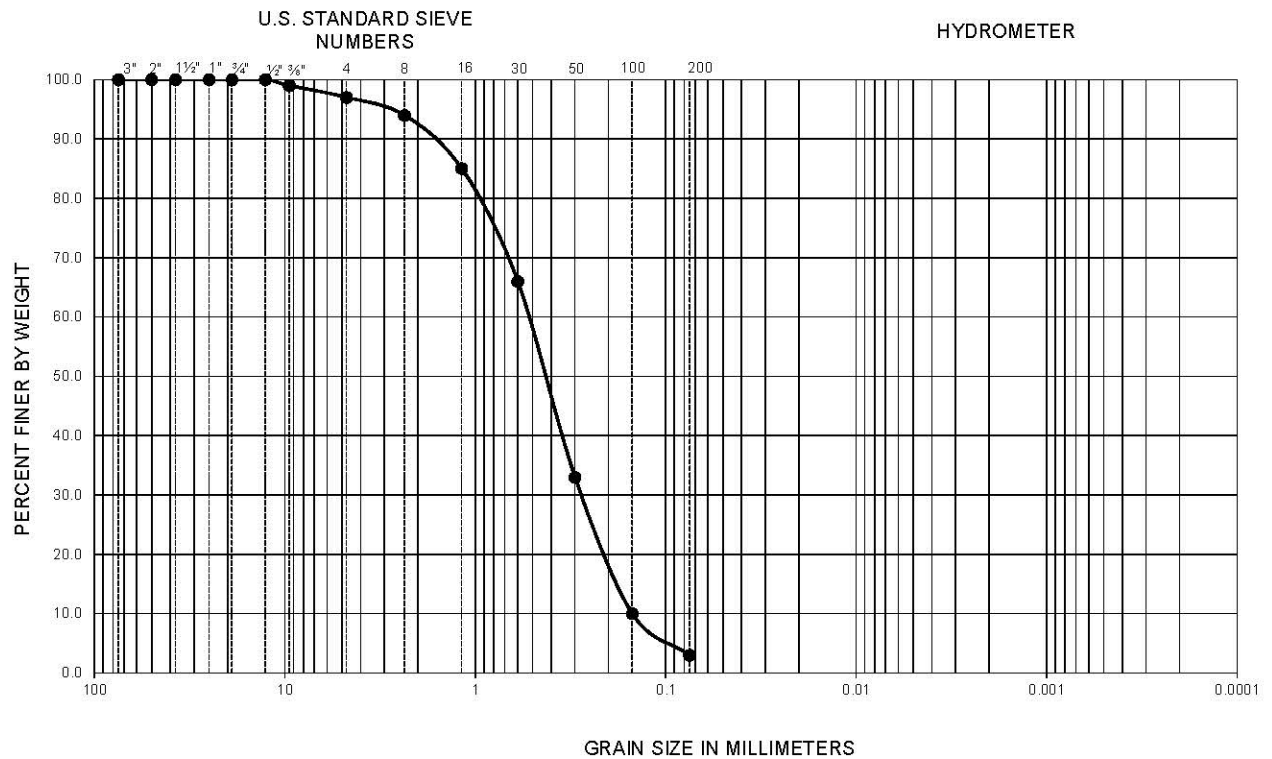
FIGURE B-6

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	BACKGROUND	0	--	--	--	0.15	0.27	0.51	3.4	1.0	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

FIGURE B-8

GRADATION TEST RESULTS

COACHELLA VALLEY
COACHELLA VALLEY, CALIFORNIA

211425001 | 5/20

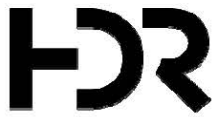


Table 1 - Laboratory Tests on Soil Samples

*Ninyo & Moore
ECORP/ON-CALL LABS
HDR Lab #20-0271LAB
22-May-20*

Sample ID

Pond 1 Pond 2 Pond 5 Pond 12 Pond 14

Cation Exchange Capacity

Units

meq/100g

2.8

2.8

4.2

5.1

3.4

Cation exchange capacity determined per EPQ SW 846 9081

meq/100g = milliequivalents per 100 grams of soil.

ND = not detected

na = not analyzed

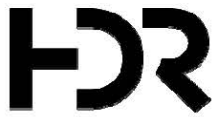


Table 1 - Laboratory Tests on Soil Samples

Ninyo & Moore
ECORP/ON-CALL LABS
HDR Lab #20-0271LAB
22-May-20

Sample ID

	Pond 19	Upstream	Background
--	---------	----------	------------

Cation Exchange Capacity

Units			
meq/100g	4.5	3.8	2.9

Cation exchange capacity determined per EPQ SW 846 9081
meq/100g = milliequivalents per 100 grams of soil.
meq/100g = milliequivalents per 100 grams of soil.
ND = not detected
na = not analyzed