TRIP REPORT

Kitsap Rifle and Revolver Club
Bremerton, Kitsap County, Washington
CONTRACT No.: 68HE0720D0005
TASK ORDER No.: 68HE0720F0160-008

Prepared for:

U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

Prepared by:

Weston Solutions, Inc.
1011 SW Klickitat Way, Suite 212
Seattle, WA 98134

August 2021

TRIP REPORT

Kitsap Rifle and Revolver Club
Bremerton, Kitsap County, Washington
CONTRACT No.: 68HE0720D0005
TASK ORDER No.: 68HE0720F0160-008

Prepared for:

U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

Prepared by:

Weston Solutions, Inc.
1011 SW Klickitat Way, Suite 212
Seattle, WA 98134

Prepared by: Stephen Nguyen Digitally signed by Stephen Nguyen DN: cn=Stephen Nguyen, o=Weston Solutions, Inc, ou=ES and T, email=stephen.nguyen@westonsolutions.com, c=US Date: 2021.08.16 12:19:13 -07'00' **Date:** 8/16/2021

Stephen Nguyen
START-V Field Team Leader

Approved by: **Date:** 8/16/2021

Tana Jones
START-V Project Team Leader

TABLE OF CONTENTS

LIST OF TABLES (EMBEDDED)

LIST OF FIGURES

LIST OF ATTACHMENTS

ACRONYMNS

µg/L	micrograms per liter
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminants of concern
E & E	Ecology and Environment, Inc.
HazCat	hazard categorization
IA	Integrated Assessment
KPHD	Kitsap Public Health District
MEL	Manchester Environmental Laboratory
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
SCO	Sediment Cleanup Objective
SHA	Site Hazard Assessment
SMS	Sediment Management Standards
START	Superfund Technical Assessment and Response Team
TAL	Target Analyte List
TO	Task Order
USEPA	U.S. Environmental Protection Agency
USFWS	U. S. Fish & Wildlife Service
USPSA	U. S. Practical Shooting Association
WA	Washington
WESTON	Weston Solutions, Inc.
WQS	Water Quality Standards

1 PLACE VISITED

Site Name:	Kitsap Rifle and Revolver Club
Property Owner:	Kitsap Rifle and Revolver Club
Location:	4900 Seabeck Highway NW, Bremerton, WA 98312
SSID:	10ZZ
USEPA ID:	WAN001002908
Latitude, Longitude:	47.60874373° North, 122.74545692° West
Date(s) of Trip:	05/21/2021

1 PURPOSE

Pursuant to U.S. Environmental Protection Agency (USEPA) Superfund Technical Assessment and Response Team (START) V Contract Number 68HE0720D0005 and Task Order (TO)/Subtask Order No.: 68HE0720F0160/68HE0720F0160-008, Weston Solutions, Inc. (WESTON) conducted a spring sampling event which was initiated as a part of a Site Reassessment, focusing on the potential migration of contaminants downstream of the Kitsap Rifle and Revolver Club (Site) in Bremerton, Washington (WA).

This Site Reassessment was requested to address data gaps from previous sampling events in order to determine the potential for contaminants from the Site to affect nearby and downstream sensitive waterway receptors. The Site is located within the watershed for Chico Creek, a salmon stream. The Site operated as a small arms range from 1926 to 2016. Previous sampling conducted by USEPA on the Site indicated that Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances are present on-site including in wetland sediments. This limited sampling was conducted in an effort to determine if contaminants from the on-site soils and sediments are migrating off of the Site. Seasonal off-site surface water and sediment sampling events were proposed to occur incrementally between spring and fall of 2021. The spring sampling event was conducted on May 21, 2021.

The objective of this Site Reassessment is to determine if contaminants of concern (COCs) are migrating from the Site into the downstream channel, potentially impacting Chico Creek, which is a Coho salmon fishery. The goals of the sampling program to achieve this objective are as follows:

- Collect and analyze samples to determine the potential for off-site migration of contaminants;
- Provide the USEPA with adequate information to determine whether the Site is eligible for placement on the National Priorities List; and
- Document any threat or potential threat to public health or the environment posed by the Site.

START visited the proposed sampling locations on March 16, 2021, to determine accessibility through public land. The sampling locations were identifiable and generally accessible either from the right-of-way or from property administered by the Kitsap County Parks and Recreation Department.

The Trip Report includes the following attachments associated with the tasks outlined above:

- Attachment A – Photograph Log
- Attachment B – Analytical Data Summary Tables
- Attachment C – Laboratory Analytical Results
- Attachment D – Data Validation Reports
- Attachment E – Field Logbook Notes

2 BACKGROUND

2.1 Site History

The Site operated as a small arms range from its development in 1926 until its closure in 2016. Historically, the land was owned by the Washington Department of Natural Resources until 2008, at which time the property was acquired by Kitsap County as part of a larger land swap. Shortly after this acquisition, Kitsap County deeded the land to the current owner, Kitsap Rifle and Revolver Club (Kitsap Public Health District [KPHD], 2012). As part of this deal, the Kitsap Rifle and Revolver Club would agree to indemnify Kitsap County regarding lead issues on the property. Additionally, the purpose of the bargain and sale agreement was to clarify the non-conforming uses of the property already in place and recognized at the time of the sale. The sale agreement also stated that the Kitsap Rifle and Revolver Club would confine its active shooting facility to the historical use of the approximately 8 acres, with the balance of the property serving as a safety and noise buffer. Any additional use outside of the 8 acres would require permits and would be subject to the rules and regulations of Kitsap County for the development of private land. (Ecology and Environment, Inc. [E & E], 2011). The Site offered weekly U. S. Practical Shooting Association

(USPSA) practical classes and falling plate matches. The Site also offered monthly USPSA pistol matches and steel matches. In addition to the matches, the Site offered personal protection classes, range officer classes, training, and qualifications for military and law enforcement agencies, and Washington Department of Fish and Wildlife's Hunter Education courses. During the time of active operations, the Kitsap Rifle and Revolver Club was open to the public (E & E, 2011). The Site has been closed and prohibited from discharge of firearms or permitted operation of a shooting range since December 2016 under injunctions from the Kitsap County and Pierce County Superior Courts.

2.2 Site Description

The Site, located at 4900 Seabeck Highway NW (47.60874373° North, 122.74545692° West), occupies 70.34 acres of land in a mixed-use area of Bremerton, WA (**Figure 1**). The Site can be accessed from Seabeck Highway, which forms the southwest portion of the southern boundary. Site topography across the shooting ranges is relatively flat, with an approximate elevation of 370 feet above mean sea level. The Site slopes gently to the south-southwest. The Site is bordered on the north and the west by Newberry Hill Heritage Park, which is administered by the Kitsap County Parks and Recreation Department. U.S. Navy Camp Wesley Harris (Camp Harris), part of Naval Base Kitsap, is located adjacent east of the Site. Land use surrounding the Site is predominantly residential and undeveloped. The closest residences to the Site are located to the south.

The Kitsap Rifle and Revolver Club Site small-arms firing ranges are defined as ranges that allow 50-caliber or smaller, non-exploding ammunition, including shotgun ammunition (E & E, 2011). The Site features include a 50-yard pistol range with covered shooting line, a 200-yard rifle range with covered shooting line, and approximately nine small sport pistol ranges. The two trailers located on the Site operated as classrooms, meeting rooms, office environments, and range stores.

According to the U. S. Fish & Wildlife Service (USFWS) National Wetlands Inventory, wetlands are present within and adjacent north of the Site. Surface water from the on-site wetlands flows south for approximately 0.7-mile along an unnamed stream on the Site to the confluence with Wildcat Creek. From Wildcat Creek, surface water flows approximately 1.9 miles to join Chico Creek and then flows another 2.4 miles into Chico Bay. A wetland associated with the headwaters of Wildcat Creek is located north, beyond the impact berms associated with the shooting ranges.

2.3 PREVIOUS INVESTIGATION(S) AND REGULATORY INVOLVEMENT

- *E & E, 2011. Integrated Assessment Kitsap Rifle and Revolver Club, Bremerton, Washington. November 2011. Prepared for USEPA Region 10.*

E & E conducted an Integrated Assessment (IA) at the Kitsap Rifle and Revolver Club in June 2011. The investigation concluded that based on the results of the IA field sampling events, the Site contains sources of CERCLA hazardous substances which are migrating to wetlands adjacent to the 50-yard pistol range and sport pistol ranges on the Site.

- *KPHD, 2013. Site Hazard Assessment. August 7, 2013.*

The Site Hazard Assessment (SHA) provided an overall Rank of 2 for the Site. The Site was added to the Confirmed and Suspected Contaminated Sites list in August 2010 after an Initial Investigation was performed by the KPHD. The SHA concluded that the likely source of contamination resulting from operations at the Kitsap Rifle and Revolver Club is due to the metal in the bullets and shot from the firing of pistols, shotguns, and rifles.

3 FIELD ACTIVITIES

3.1 Mobilization

Two START personnel mobilized from the USEPA emergency response and logistics center on May 21, 2021, following a prerequisite weather condition (rain) that had occurred earlier in the week, to conduct sample collection activities. A sampling event following a rain condition presented the best opportunity to collect potential runoff from the site. According to National Weather Service, rainfall totals in the area within the preceding 48 hours were reported at 0.38 inches (National Weather Service, 2021). An unnamed stream forms from wetlands located on the Site and on lands within the Kitsap County Newberry Hill Park. This stream flows south and into Wildcat Creek, into Chico Creek, and into Chico Bay.

3.2 Sampling

Field work was conducted to meet the objective developed for the Site Reassessment as documented in the approved Sampling and Analysis Plan (SAP) for the Site (WESTON, 2021). Six surface water samples, including a duplicate, were collected directly from the stream followed by co-located sediment sampling using dedicated scoops. A total of six sediment samples were collected. One sediment background sample (KRRC-SE01) was collected from a drainage that

flows from southeast to northwest and onto the Site, just before a culvert and just north of Seabeck Highway. No co-located surface water sample was collected at KRRC-SE01 because the drainage was dry. Two of the co-located surface water and sediment background samples, KRRC-SW/SE02 and KRRC-SW/SE06, were collected from drainages upstream and north of the Site within the Newberry Hill Heritage Park boundary. The remaining three samples, KRRC-SW/SE03 through KRRC-SW/SE05, were collected in serial and downstream from the Site along the unnamed stream. Sample locations are presented in **Figure 2**.

Aliquots of surface water samples were filtered for dissolved metals analysis; all surface water samples were preserved with nitric acid. The sediment samples were collected using dedicated scoops. All samples were processed on-site and were hand-delivered by START to the USEPA regional laboratory: Manchester Environmental Laboratory (MEL) in Port Orchard, Washington for analysis. Analyses for surface water samples included polycyclic aromatic hydrocarbons (PAHs), total and dissolved Target Analyte List (TAL) metals, and hardness. Analyses for sediment samples included PAHs and TAL metals.

4 ANALYTICAL RESULTS

4.1 Surface Water Sampling Results

Surface water sample results were compared to three times the analyte concentrations of background sample KRRC-SW02 to determine if a release of hazardous substances from the Site could be documented (**Table 1**). Dissolved concentrations of arsenic, copper, and lead were primary COCs that were detected at three-times the background concentrations. Dissolved concentrations of aluminum, manganese, and zinc were also detected at three times the background concentrations. Only total manganese was detected at three times the total metal background concentration (**Table 3**).

Surface water sample results were compared to regulatory benchmarks to document any threat or potential threat to public health, or the environment posed by the Site. PAHs were not detected in any of the surface water samples collected (**Table 3**). Except for KRRC-SW05, concentrations of total arsenic in all surface water samples exceeded the Model Toxic Control Act (MTCA) Surface Water Method B – Cancerous screening limit of 0.098 micrograms per liter (µg/L), with exceeding concentrations ranging between 0.23 µg/L and 0.43 µg/L (**Table 3**). The concentration of dissolved

arsenic exceeded the MTCA Surface Water Method B – Cancerous screening limit in sample KRRC-SW03 at 0.32 µg/L (**Table 2b**). It should be noted that the laboratory reporting limit for total and dissolved arsenic of 0.20 µg/L is higher than the MTCA screening limit; therefore, non-detections cannot be considered non-exceedances.

The dissolved mercury concentration of 0.0512 µg/L detected in sample KRRC-SW06 exceeded the Washington Water Quality Standards (WQS) for Surface Water Aquatic Life – Freshwater Chronic of 0.012 µg/L (**Table 2f**). Dissolved lead concentrations in KRRC-SW03 (**Table 2b**), KRRC-SW04 (**Table 2c**) and its duplicate (**Table 2d**), were detected in exceedance of the hardness-dependent Washington WQS for Surface Water Aquatic Life – Freshwater Chronic (0.2 µg/L and 0.3 µg/L), with exceeding concentrations ranging between 0.48 µg/L and 0.90 µg/L. Surface water sample exceedances are depicted on **Figure 3.** The surface water analytical data summary tables are included in **Attachment B** (**Tables 1 through 3**) and the full laboratory report can be found in **Attachment C**.

A list of metals concentrations that exceeded one or more screening levels in surface water samples is presented in **Table 3-1** (below).

Table 4-1 Surface Water Sample Screening Level Exceedances

Action Level	Analyte
Three times background	Aluminum, arsenic, copper, lead manganese, zinc (dissolved) Manganese (total)
MTCA Surface Water Method B – Cancerous	Arsenic (total)
Washington WQS for Surface Water Aquatic Life - Freshwater Chronic	Arsenic, lead, and mercury (dissolved)

Notes:
MTCA = Model Toxics Control Act
WQS = Water Quality Standards

4.2 Sediment Sampling Results

Sediment sample results were compared to three times the analyte concentrations of background sample KRRC-SE02 to determine if a release of hazardous substances from the Site could be documented (**Table 4**). Lead is the primary COC that was detected at three-times the background concentration in three samples (KRRC-SE03, KRRC-SE03 duplicate, and KRRC-SE05).

Manganese was also detected at three times the background concentration at one location (KRRC-SE03).

Sediment sample results were compared to regulatory benchmarks to document any threat or potential threat to public health, or the environment posed by the Site. Nickel was detected in sample KRRC-SE01 in exceedance of the Washington Sediment Management Standards (SMS) – Freshwater Sediment – Sediment Cleanup Objective (SCO). KRRC-SE01 was the only sample with any detections of PAHs (benzo(a)pyrene and benzo(g,h,i)perylene); however, no SMS exceedances were detected for these analytes. Sediment sample exceedances are depicted on **Figure 3.** The sediment analytical data summary table is included in **Attachment B** (**Table 4**) and the full laboratory report can be found in **Attachment C**.

A list of metals concentrations that exceeded one or more screening levels in sediment samples is presented in **Table 3-2** (below).

Table 4-2 Sediment Sample Screening Level Exceedance

Action Level	Analyte
Three times background	Lead and manganese
Washington SMS – Freshwater Sediment-SCO	Nickel

Notes:
SMS = Sediment Management Standards
SCO = Sediment Cleanup Objective

4.2.1 Data Useability

The samples were obtained and validated by MEL. START performed data verification in accordance with *National Functional Guidelines for Organic Superfund Methods Data Review (November 2020)* and *National Functional Guidelines for Inorganic Superfund Methods Data Review (November 2020)*. The data packages were reviewed to verify they met the technical requirements and quality assurance guidelines established for the respective analytical methods. The following items were evaluated for each laboratory sample delivery group (as applicable):

- The completeness of the laboratory reports, verifying that all required components were present and that the samples indicated on the accompanying chain-of-custodies were addressed.
- The sample receipt temperature, verifying the cooler temperature was within acceptable range.

- Holding times, verifying the samples were extracted and/or analyzed within the required holding time.
- The case narrative, verifying noted sample receipt, sample preservation, and/or analytical exceptions (instrument performance checks, initial calibration, initial and continuing calibration verification checks, etc.).
- Laboratory blanks, determining whether laboratory contamination was present.
- Internal standards, verifying the recoveries were within the acceptable range.
- Laboratory control samples and/or laboratory control sample duplicates, verifying the accuracy of the method.
- Matrix spike/matrix spike duplicate samples (MS/MDS), determining whether matrix interference was present and if laboratory precision was within the acceptable range.
- Serial dilution samples, verifying that the percent difference was within the acceptance criteria.
- Field duplicates, verifying that field precision was within the acceptable range.
- Reporting limits and method detection limits, confirming they were adjusted to reflect dilution factors, if applicable.
- Sample results, confirming that the detected concentration was within the instrument calibration range. If the concentration exceeded the instrument calibration range, the data were reviewed to determine if the sample was re-analyzed at a secondary dilution.

START reviewed the analytical results to verify that the data were acceptable for their intended use in meeting the objectives of the project. The analytical results for the samples collected for this project are acceptable for use with qualifiers assigned during validation. Data validation reports are included in **Attachment D**.

5 SUMMARY AND CONCLUSIONS

5.1 Summary of Activities

START conducted a spring sampling event under a Site Reassessment at areas near the Kitsap Rifle and Revolver Club located in Bremerton, Kitsap County, WA on May 21, 2021. A total of seven sediment samples and six surface water samples were collected from six sample locations around the Site. START processed the samples on-site and hand-delivered all samples to MEL.

5.2 Conclusions

START completed a spring sampling event to assess the potential migration of contaminants from the Kitsap Rifle and Revolver Club in Bremerton, Washington. Exceedances of three times the

background concentration for primary COCs arsenic, copper, and lead were detected in surface water for the dissolved fraction and lead in sediment samples at locations downstream of the Site. Additionally, concentrations of dissolved arsenic and lead were detected in downstream surface water samples at concentrations exceeding their respective WQS.

6 REFERENCES

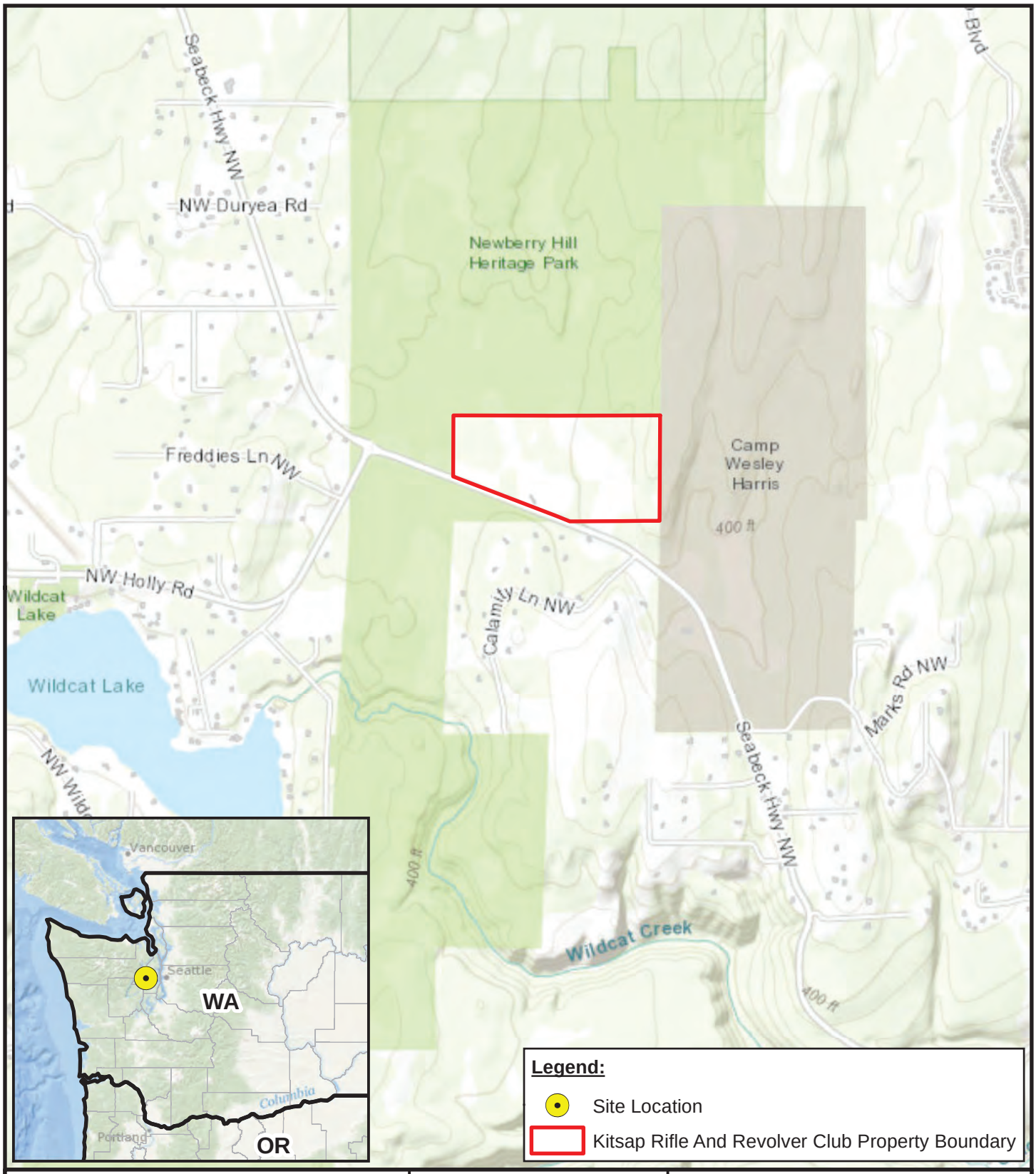
Ecology & Environment, Inc. (E & E), 2011. *Integrated Assessment Kitsap Rifle and Revolver Club, Bremerton, Washington*. November 2011.

Kitsap Public Health District (KPHD), 2012. *Sampling and Analysis Plan Kitsap Rifle and Revolver Club, 4900 Seabeck Hwy NW, Bremerton, Washington*. June 13, 2012.

National Weather Service, 2021. Weather observations for the past three days: Bremerton, Bremerton National Airport. Accessed from: https://w1.weather.gov/obhistory/KPWT.html. Accessed May 20, 2021.

Weston Solutions, Inc. (WESTON), 2021. *Sampling and Analysis Plan for Kitsap Rifle and Revolver Club Site Reassessment, Bremerton, Kitsap County, Washington*. May 17, 2021.

FIGURES



Path: C:\Users\epplek\Desktop\Projects\Kitsap Rifel and Revolver Club\Maps\Fig1 Site Location map.mxd

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Background: ESRI World Topo Map (2021)
Boundary: Washington State Cadestral 2020
Inset Background: NOAA Ocean Basemap (2021)

0 0.5 1 Miles

N

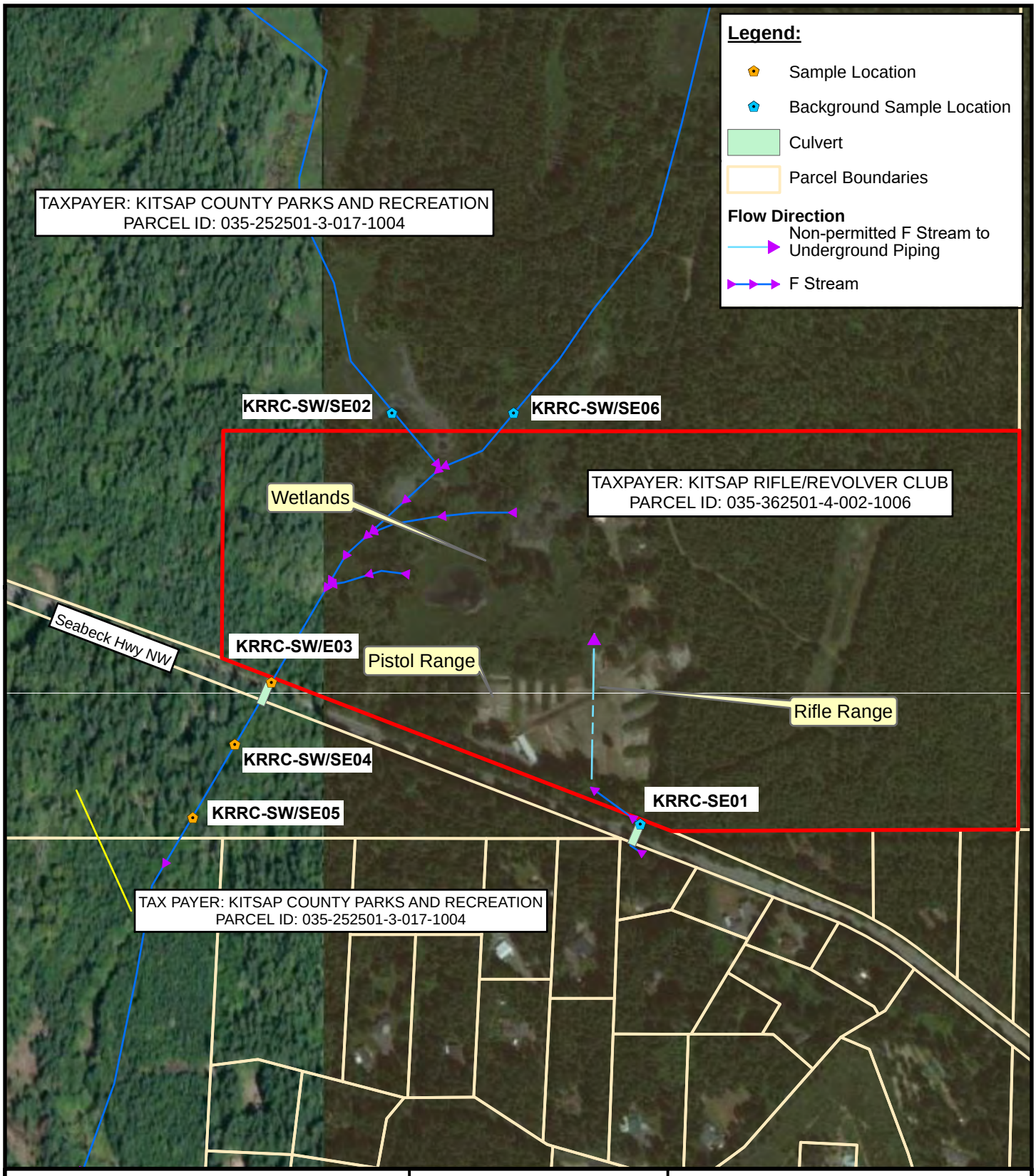
Prepared for:
USEPA - Region 10

TO No./Subtask No.:
68HE0720F0160/008

Prepared By:
Weston Solutions, Inc.
START V
1011 SW Klickitat Way
Suite 212
Seattle, WA

FIGURE 1
SITE LOCATION MAP
KITSAP RIFLE AND REVOLVER CLUB
BREMERTON, KITSAP COUNTY
WASHINGTON

Date: 3/18/2021



Path: C:\Users\lepplek\Desktop\Projects\Kitsap Rifel and Revolver Club\Maps\Fig B-2 Sample Location map.mxd

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Background: ESRI World Imagery Map (2021)
Parcels: Washington Cadestral Boundary (2020)
Taxpayer Information: Kitsap County Assessor (2021)

0 700 1,400 Feet

N

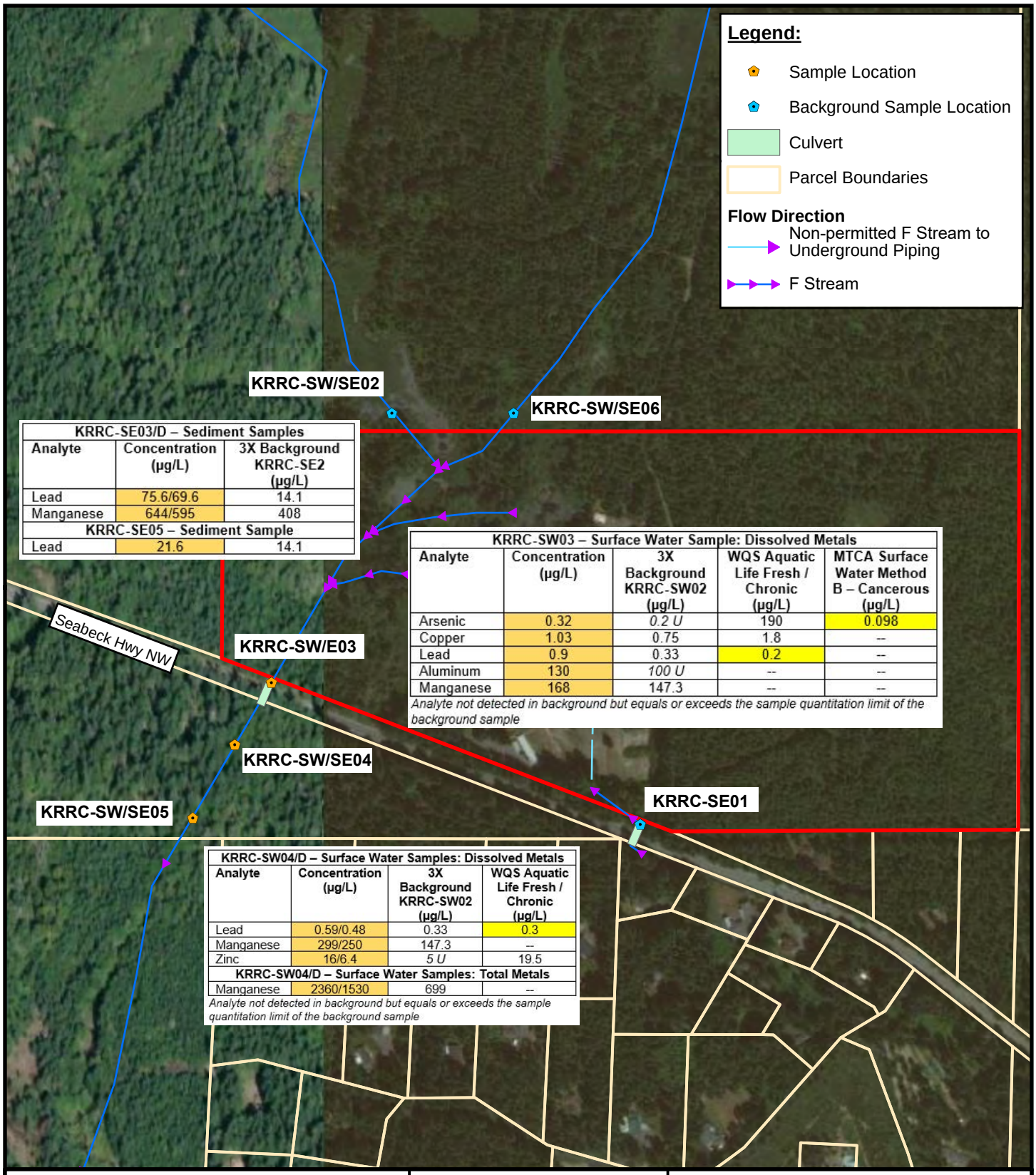
Prepared for:
USEPA - Region 10

TO No./Subtask No.:
68HE0720F0160/008

Prepared By:
Weston Solutions, Inc.
START V
1011 SW Klickitat Way
Suite 212
Seattle, WA

FIGURE 2
SAMPLE LOCATION MAP
KITSAP RIFLE AND REVOLVER CLUB
BREMERTON, KITSAP COUNTY
WASHINGTON

Date: 7/25/2021



KRRC-SE03/D – Sediment Samples		
Analyte	Concentration (µg/L)	3X Background KRRC-SE2 (µg/L)
Lead	75.6/69.6	14.1
Manganese	644/595	408
KRRC-SE05 – Sediment Sample		
Lead	21.6	14.1

KRRC-SW03 – Surface Water Sample: Dissolved Metals				
Analyte	Concentration (µg/L)	3X Background KRRC-SW02 (µg/L)	WQS Aquatic Life Fresh / Chronic (µg/L)	MTCA Surface Water Method B – Cancerous (µg/L)
Arsenic	0.32	*0.2 U*	190	0.098
Copper	1.03	0.75	1.8	--
Lead	0.9	0.33	0.2	--
Aluminum	130	*100 U*	--	--
Manganese	168	147.3	--	--

Analyte not detected in background but equals or exceeds the sample quantitation limit of the background sample

KRRC-SW04/D – Surface Water Samples: Dissolved Metals			
Analyte	Concentration (µg/L)	3X Background KRRC-SW02 (µg/L)	WQS Aquatic Life Fresh / Chronic (µg/L)
Lead	0.59/0.48	0.33	0.3
Manganese	299/250	147.3	--
Zinc	16/6.4	*5 U*	19.5
KRRC-SW04/D – Surface Water Samples: Total Metals			
Manganese	2360/1530	699	--

Analyte not detected in background but equals or exceeds the sample quantitation limit of the background sample

Path: C:\Users\lepplek\Desktop\Projects\Kitsap Rifel and Revolver Club\Maps\Fig B-2 Sample Location map.mxd

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Background: ESRI World Imagery Map (2021)
Parcels: Washington Cadestral Boundary (2020)
Taxpayer Information: Kitsap County Assessor (2021)

0 700 1,400 Feet

N

Prepared for:
USEPA - Region 10

TO No./Subtask No.:
68HE0720F0160/008

Prepared By:
Weston Solutions, Inc.
START V
1011 SW Klickitat Way
Suite 212
Seattle, WA

FIGURE 3
SAMPLE EXCEEDANCES MAP
KITSAP RIFLE AND REVOLVER CLUB
BREMERTON, KITSAP COUNTY
WASHINGTON

Date: 8/6/2021

ATTACHMENT A
PHOTOGRAPH LOG

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Kitsap Rifle and Revolver Club	Bremerton, Kitsap County, Washington	68HE0720F0160

Photo No. 1	Date: 05/21/2021
Photo Coordinates	
Lat	47.606871
Long	-122.751136
Direction Photo Taken:	Southwest
Description:	Sample location KRRC-05.

Photo No. 2	Date: 05/21/2021
Photo Coordinates	
Lat	47.607142
Long	-122.750515
Direction Photo Taken:	Northeast
Description:	Sample location KRRC-04.

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Kitsap Rifle and Revolver Club	Bremerton, Kitsap County, Washington	68HE0720F0160

Photo No. 3	Date: 05/21/2021
Photo Coordinates	
Lat	47.607735
Long	-122.749285
Direction Photo Taken:	Southwest
Description:	Sample location KRRC-03.

Photo No. 4	Date: 05/21/2021
Photo Coordinates	
Lat	47.610494
Long	-122.745891
Direction Photo Taken:	Southeast
Description:	Sample location KRRC-06.

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Kitsap Rifle and Revolver Club	Bremerton, Kitsap County, Washington	68HE0720F0160

Photo No. 5	Date: 05/21/2021
Photo Coordinates	
Lat	47.611982
Long	-122.749217
Direction Photo Taken:	Southeast
Description:	Sample location KRRC-02.

Photo No. 6	Date: 05/21/2021
Photo Coordinates	
Lat	47.607042
Long	-122.745468
Direction Photo Taken:	South
Description:	Sample location KRRC-01.

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Kitsap Rifle and Revolver Club	Bremerton, Kitsap County, Washington	68HE0720F0160

Photo No. 7	Date: 05/21/2021
Photo Coordinates	
Lat	47.607322
Long	-122.750358
Direction Photo Taken:	NA
Description:	Surface water and sediment samples collected from KRRC-04.

Photo No. 8	Date: 05/21/2021
Photo Coordinates	
Lat	47.607778
Long	-122.749336
Direction Photo Taken:	NA
Description:	Surface water and sediment samples collected from KRRC-03.

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Kitsap Rifle and Revolver Club	Bremerton, Kitsap County, Washington	68HE0720F0160

Photo No. 9	Date: 05/21/2021
Photo Coordinates	
Lat	47.607728
Long	-122.749306
Direction Photo Taken:	NA

Description:

Surface water and sediment samples collected from KRRC-06.

ATTACHMENT B
ANALYTICAL DATA SUMMARY TABLES

Table 1
Surface Water Dissolved Metals Comparison to Background

Analyte	CAS.NO	Units	Station Sample ID Date Type	Background		3X Background Sample KRRC-SW02	KRRC-SW03 21214462 5/21/2021 FS	KRRC-SW04 21214464 5/21/2021 FS	KRRC-SW04 21214470 5/21/2021 FD	KRRC-SW05 21214466 5/21/2021 FS
				KRRC-SW02 21214460 5/21/2021 FS	KRRC-SW06 21214468 5/21/2021 FS					
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	100 U	100 U	100	**130**	100 U	100 U	100 U
Barium	7440-39-3	µg/L	--	**3.4**	**3.6**	10.2	**4.9**	**7.85**	**9.17**	**4.9**
Beryllium	7440-41-7	µg/L	--	1 U	1 U	1	1 U	1 U	1 U	1 U
Calcium	7440-70-2	µg/L	--	**2930**	**2420**	8790	**2540**	**2930**	**3020**	**4790**
Chromium	7440-47-3	µg/L	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Cobalt	7440-48-4	µg/L	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Iron	7439-89-6	µg/L	--	**101**	**71**	303	**228**	**190**	**167**	**83**
Magnesium	7439-95-4	µg/L	--	**1200**	**865**	3600	**945**	**1180**	**1220**	**1760**
Manganese	7439-96-5	µg/L	--	**49.1**	**13**	147.3	**168**	**299**	**250**	**93.3**
Nickel	7440-02-0	µg/L	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Potassium	7440-09-7	µg/L	--	700 U	700 U	700	700 U	700 U	700 U	700 U
Selenium	7782-49-2	µg/L	--	50 U	50 U	50	50 U	50 U	50 U	50 U
Silver	7440-22-4	µg/L	--	10 U	10 U	10	10 U	10 U	10 U	10 U
Sodium	7440-23-5	µg/L	--	**1930**	**1840**	5790	**1610**	**2680**	**2810**	**2890**
Thallium	7440-28-0	µg/L	--	50 U	50 U	50	50 U	50 U	50 U	50 U
Vanadium	7440-62-2	µg/L	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Zinc	7440-66-6	µg/L	--	5 U	5 U	5	5 U	**16**	**6.4**	5 U
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U
Arsenic	7440-38-2	µg/L	--	0.2 U	0.2 U	0.2	**0.32**	0.2 U	0.2 U	0.2 U
Cadmium	7440-43-9	µg/L	--	0.05 U	0.05 U	0.05	0.05 U	0.05 U	0.05 U	0.05 U
Copper	7440-50-8	µg/L	--	**0.25**	**0.35**	0.75	**1.03**	**0.51**	**0.43**	**0.32**
Lead	7439-92-1	µg/L	--	**0.11**	**0.14**	0.33	**0.9**	**0.58**	**0.48**	**0.07**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	--	0.05 U	0.05 U	0.05	0.05 U	0.05 U	0.05 U	0.05 U

Notes:

= Analyte concentrations exceed three times the selected background concentration or the sample quantitation limit

BOLD = **Analyte was detected**

-- = No benchmark estabished

Abbreviations:

µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FD = Field Duplicate
FS = Field Sample
MS = Mass Spectrometry
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency

Table 2a
KRRC-SW02 Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		Station Sample ID Date Type	KRRC-SW02 21214460 5/21/2021 FS
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous		
Metals (ICP-AES USEPA 200.7)									
Aluminum	7429-90-5	µg/L	--	--	--	--	--	--	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	--	**3.4**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	--	**2930**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	--	**101**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	--	**1200**
Manganese	7439-96-5	µg/L	--	--	--	--	--	--	**49.1**
Nickel*	7440-02-0	µg/L	31.8	286.0	150	--	1100	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	--	50 U
Silver*	7440-22-4	µg/L	--	0.1	--	--	26000	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	--	**1930**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	--	5 U
Zinc*	7440-66-6	µg/L	21.1	23.1	2300	--	17000	--	5 U
Metals (ICP-MS USEPA 200.8)									
Antimony	7440-36-0	µg/L	--	--	12	--	1000	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	--	0.2 U
Cadmium*	7440-43-9	µg/L	0.3	0.5	--	--	41	--	0.05 U
Copper*	7440-50-8	µg/L	2.3	2.9	130	--	2900	--	**0.25**
Lead*	7439-92-1	µg/L	0.3	7.8	--	--	--	--	**0.11**
Mercury (CVAA USEPA 245.1)									
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	--	0.05 U

Notes:
BOLD = **Analyte was detected**
-- = No benchmark estabished
*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction
[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)
[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:
µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FS = Field Sample
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 2b
KRRC-SW03 Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		3X Background Sample KRRC-SW02	Station Sample ID Date Type	KRRC-SW03 21214460 5/21/2021 FS
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous			
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	--	--	--	--	100	--	**130**
Barium	7440-39-3	µg/L	--	--	--	--	--	10.2	--	**4.9**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	1	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	8790	--	**2540**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	5	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	5	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	303	--	**228**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	3600	--	**945**
Manganese	7439-96-5	µg/L	--	--	--	--	--	147.3	--	**168**
Nickel*	7440-02-0	µg/L	24.9	223.8	150	--	1100	5	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	700	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	50	--	50 U
Silver*	7440-22-4	µg/L	NS	0.1	--	--	26000	10	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	5790	--	**1610**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	50	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	5	--	5 U
Zinc*	7440-66-6	µg/L	16.5	18.0	2300	--	17000	5	--	5 U
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	--	12	--	1000	0.5	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	0.2	--	**0.32**
Cadmium*	7440-43-9	µg/L	0.2	0.3	--	--	41	0.05	--	0.05 U
Copper*	7440-50-8	µg/L	1.8	2.2	130	--	2900	0.75	--	**1.03**
Lead*	7439-92-1	µg/L	0.2	5.6	--	--	--	0.33	--	**0.9**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	0.05	--	0.05 U

Notes:

= Analyte concentrations exceed three times the selected background concentration or the sample quantitation limit

= Analyte concentrations exceeds screening value and three times the selected background concentration or the sample quantitation limit

BOLD = **Analyte was detected**

-- = No benchmark estabished

*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction

[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)

[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:

µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FS = Field Sample
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 2c
KRRC-SW04 Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		3X Background Sample KRRC-SW02	Station Sample ID Date Type	KRRC-SW04 21214460 5/21/2021 FS
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous			
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	--	--	--	--	100	--	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	10.2	--	**7.85**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	1	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	8790	--	**2930**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	5	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	5	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	303	--	**190**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	3600	--	**1180**
Manganese	7439-96-5	µg/L	--	--	--	--	--	147.3	--	**299**
Nickel*	7440-02-0	µg/L	29.4	265.0	150	--	1100	5	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	700	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	50	--	50 U
Silver*	7440-22-4	µg/L	NS	0.1	--	--	26000	10	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	5790	--	**2680**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	50	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	5	--	5 U
Zinc*	7440-66-6	µg/L	19.5	21.4	2300	--	17000	5	--	**16**
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	--	12	--	1000	0.5	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	0.2	--	0.2 U
Cadmium*	7440-43-9	µg/L	0.2	0.4	--	--	41	0.05	--	0.05 U
Copper*	7440-50-8	µg/L	2.1	2.6	130	--	2900	0.75	--	**0.51**
Lead*	7439-92-1	µg/L	0.3	7.1	--	--	--	0.33	--	**0.59**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	0.05	--	0.05 U

Notes:

= Analyte concentrations exceed three times the selected background concentration or the sample quantitation limit

= Analyte concentrations exceeds screening value and three times the selected background concentration or the sample quantitation limit

BOLD = **Analyte was detected**

-- = No benchmark estabished

*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction

[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)

[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:

µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FS = Field Sample
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 2d
KRRC-SW04 Duplicate Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		3X Background Sample KRRC-SW02	Station Sample ID Date Type	KRRC-SW04 21214460 5/21/2021 FD
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous			
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	--	--	--	--	100	--	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	10.2	--	**9.17**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	1	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	8790	--	**3020**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	5	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	5	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	303	--	**167**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	3600	--	**1220**
Manganese	7439-96-5	µg/L	--	--	--	--	--	147.3	--	**250**
Nickel*	7440-02-0	µg/L	28.0	251.9	150	--	1100	5	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	700	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	50	--	50 U
Silver*	7440-22-4	µg/L	NS	0.1	--	--	26000	10	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	5790	--	**2810**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	50	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	5	--	5 U
Zinc*	7440-66-6	µg/L	18.6	20.3	2300	--	17000	5	--	**6.4**
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	--	12	--	1000	0.5	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	0.2	--	0.2 U
Cadmium*	7440-43-9	µg/L	0.2	0.4	--	--	41	0.05	--	0.05 U
Copper*	7440-50-8	µg/L	2.0	2.5	130	--	2900	0.75	--	**0.43**
Lead*	7439-92-1	µg/L	0.3	6.6	--	--	--	0.33	--	**0.48**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	0.05	--	0.05 U

Notes:

= Analyte concentrations exceed three times the selected background concentration or the sample quantitation limit

= Analyte concentrations exceeds screening value and three times the selected background concentration or the sample quantitation limit

BOLD = **Analyte was detected**

-- = No benchmark estabished

*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction

[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)

[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:

µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FD = Field Duplicate
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 2e
KRRC-SW05 Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		3X Background Sample KRRC-SW02	Station Sample ID Date Type	KRRC-SW05 21214460 5/21/2021 FS
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous			
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	--	--	--	--	100	--	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	10.2	--	**4.9**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	1	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	8790	--	**4790**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	5	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	5	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	303	--	**83**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	3600	--	**1760**
Manganese	7439-96-5	µg/L	--	--	--	--	--	147.3	--	**93.3**
Nickel*	7440-02-0	µg/L	37.4	336.4	150	--	1100	5	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	700	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	50	--	50 U
Silver*	7440-22-4	µg/L	NS	0.2	--	--	26000	10	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	5790	--	**2890**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	50	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	5	--	5 U
Zinc*	7440-66-6	µg/L	24.8	27.1	2300	--	17000	5	--	5 U
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	--	12	--	1000	0.5	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	0.2	--	0.2 U
Cadmium*	7440-43-9	µg/L	0.3	0.6	--	--	41	0.05	--	0.05 U
Copper*	7440-50-8	µg/L	2.7	3.4	130	--	2900	0.75	--	**0.32**
Lead*	7439-92-1	µg/L	0.4	9.8	--	--	--	0.33	--	**0.07**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	0.05	--	0.05 U

Notes:
BOLD = **Analyte was detected**
-- = No benchmark estabished
*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction
[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)
[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:
µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FS = Field Sample
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 2f
KRRC-SW06 Dissolved Metals Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		3X Background Sample KRRC-SW02	Station Sample ID Date Type	KRRC-SW06 21214460 5/21/2021 FS
			Surface Water Aquatic Life Fresh/Chronic	Surface Water Aquatic Life Fresh/Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous			
Metals (ICP-AES USEPA 200.7)										
Aluminum	7429-90-5	µg/L	--	--	--	--	--	100	--	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	10.2	--	**3.6**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	1	--	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	8790	--	**2420**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	5	--	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	5	--	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	303	--	**71**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	3600	--	**865**
Manganese	7439-96-5	µg/L	--	--	--	--	--	147.3	--	**13**
Nickel*	7440-02-0	µg/L	32.6	293.9	150	--	1100	5	--	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	700	--	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	50	--	50 U
Silver*	7440-22-4	µg/L	NS	0.1	--	--	26000	10	--	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	5790	--	**1840**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	50	--	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	5	--	5 U
Zinc*	7440-66-6	µg/L	21.7	23.7	2300	--	17000	5	--	5 U
Metals (ICP-MS USEPA 200.8)										
Antimony	7440-36-0	µg/L	--	--	12	--	1000	0.5	--	0.5 U
Arsenic	7440-38-2	µg/L	190	360	10	0.098	18	0.2	--	0.2 U
Cadmium*	7440-43-9	µg/L	0.3	0.5	--	--	41	0.05	--	0.05 U
Copper*	7440-50-8	µg/L	2.3	3.0	130	--	2900	0.75	--	**0.35**
Lead*	7439-92-1	µg/L	0.3	8.1	--	--	--	0.33	--	**0.14**
Mercury (CVAA USEPA 245.1)										
Mercury	7439-97-6	µg/L	0.012	2	--	--	--	0.05	--	**0.0512**

Notes:

= Analyte concentration exceeds the screening value

BOLD = **Analyte was detected**

-- = No benchmark estabished

*Fresh surface water criteria for the protection of aquatic life are not a single number, calculated based on hardness of the water for the dissolved fraction

[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)

[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:

µg/L = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
ICP = Inductively Coupled Plasma
FS = Field Sample
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

Table 3
Surface Water Total Metals and PAH Analytical Results Summary

Analyte	CAS.NO	Units	Washington Water Quality Standards[1]			MTCA[2]		Station Sample ID Date Type	Background		3X Background Sample KRRC-SW02	KRRC-SW03 21214461 5/21/2021 FS	KRRC-SW04 21214463 5/21/2021 FS	KRRC-SW04 21214469 5/21/2021 FD	KRRC-SW05 21214465 5/21/2021 FS
			Surface Water Aquatic Life Fresh/ Chronic	Surface Water Aquatic Life Fresh/ Acute	Surface Water Human Health Fresh Water	Surface Water Method B - Cancerous	Surface Water Method B - Non-Cancerous		KRRC-SW02 21214459 5/21/2021 FS	KRRC-SW06 21214467 5/21/2021 FS					
Metals (ICP-AES USEPA 200.7)															
Aluminum	7429-90-5	µg/L	--	--	--	--	--	--	**646 J (1072)**	**664 J (1102)**	3216	**789 J (475)**	**490 J (295)**	**320 J (193)**	100 U
Barium	7440-39-3	µg/L	--	--	--	--	--	--	**15.1**	**16.1**	45.3	**9.82**	**29.1**	**22.2**	**4.8**
Beryllium	7440-41-7	µg/L	--	--	--	--	270	--	1 U	1 U	1	1 U	1 U	1 U	1 U
Calcium	7440-70-2	µg/L	--	--	--	--	--	--	**3810**	**4370**	11430	**2820**	**3320**	**3140**	**4540**
Chromium	7440-47-3	µg/L	--	--	--	--	240000	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Cobalt	7440-48-4	µg/L	--	--	--	--	--	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Iron	7439-89-6	µg/L	--	--	--	--	--	--	**1310**	**472**	3930	**554**	**509**	**373**	**153**
Magnesium	7439-95-4	µg/L	--	--	--	--	--	--	**1350**	**1150**	4050	**1040**	**1330**	**1260**	**1680**
Manganese	7439-96-5	µg/L	--	--	--	--	--	--	**233**	**51.8**	699	**397**	**2360**	**1530**	**123**
Nickel	7440-02-0	µg/L	*	*	*	--	1100	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Potassium	7440-09-7	µg/L	--	--	--	--	--	--	700 U	700 U	700	700 U	700 U	700 U	700 U
Selenium	7782-49-2	µg/L	5	20	120	--	2700	--	50 U	50 U	50	50 U	50 U	50 U	50 U
Silver	7440-22-4	µg/L	*	*	--	--	26000	--	10 U	10 U	10	10 U	10 U	10 U	10 U
Sodium	7440-23-5	µg/L	--	--	--	--	--	--	**1840**	**1910**	5520	**1640**	**2890**	**2780**	**2760**
Thallium	7440-28-0	µg/L	--	--	0.24	--	0.22	--	50 U	50 U	50	50 U	50 U	50 U	50 U
Vanadium	7440-62-2	µg/L	--	--	--	--	--	--	5 U	5 U	5	5 U	5 U	5 U	5 U
Zinc	7440-66-6	µg/L	*	*	--	--	17000	--	**8.2**	**5.9**	24.6	**5.7**	**19**	**14**	5 U
Metals (ICP-MS USEPA 200.8)															
Antimony	7440-36-0	µg/L	--	--	12	--	1000	--	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U
Arsenic	7440-38-2	µg/L	*	*	*	0.098	18	--	**0.28**	**0.23**	0.84	**0.43**	**0.28**	**0.24**	0.2 U
Cadmium	7440-43-9	µg/L	*	*	--	--	41	--	**0.05**	0.05 U	0.15	0.05 U	**0.07**	0.05 U	0.05 U
Copper	7440-50-8	µg/L	*	*	*	--	2900	--	**1.2**	**1.52**	3.6	**1.72**	**0.81**	**0.7**	0.2 U
Lead	7439-92-1	µg/L	*	*	--	--	--	--	**4.97**	**5.89**	14.91	**4.61**	**1.91**	**1.28**	**0.2**
Mercury (CVAA USEPA 245.1)															
Mercury	7439-97-6	µg/L	*	*	--	--	--	--	0.05 U	**0.05**	0.05	0.05 U	0.05 U	0.05 U	0.05 U
Polycyclic Aromatic Hydrocarbons (SW-846 8270E)															
9H-Fluorene	86-73-7	µg/L	--	--	420	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Acenaphthene	83-32-9	µg/L	--	--	110	--	640	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Acenaphthylene	208-96-8	µg/L	--	--	--	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Anthracene	120-12-7	µg/L	--	--	3100	--	26000	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Benzo(a)anthracene	56-55-3	µg/L	--	--	0.014	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Benzo(a)pyrene	50-32-8	µg/L	--	--	0.0014	0.035	26	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Benzo(g,h,i)perylene	191-24-2	µg/L	--	--	--	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Benzo[b]Fluoranthene	205-99-2	µg/L	--	--	0.014	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Benzo[k]fluoranthene	207-08-9	µg/L	--	--	0.014	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Chrysene	218-01-9	µg/L	--	--	1.4	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Dibenzo[a,h]anthracene	53-70-3	µg/L	--	--	0.0014	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Fluoranthene	206-44-0	µg/L	--	--	16	--	90	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Indeno(1,2,3-cd)pyrene	193-39-5	µg/L	--	--	0.014	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Naphthalene	91-20-3	µg/L	--	--	--	--	4900	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Naphthalene, 2-methyl-	91-57-6	µg/L	--	--	--	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Phenanthrene	85-01-8	µg/L	--	--	--	--	--	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
Pyrene	129-00-0	µg/L	--	--	310	--	2600	--	0.02 U	0.02 U	0.02	0.05 U	0.05 U	0.05 U	0.02 U
SM2340B															
Hardness as CaCO3	CaCO3	mg/L	--	--	--	--	--	--	**15.1**	**15.6**	--	**11.3**	**13.8**	**13**	**18.3**

Notes:

= Analyte concentrations exceed three times the selected background concentration

= Analyte concentrations exceed the screening value

BOLD = Analyte was detected

(2609) = Adjusted value for J qualified data based on reported bias

-- = No benchmark estabished

*Fresh surface water criteria for the protection of aquatic life are not a single number, but change based on hardness of the water for the dissolved fraction (do not apply to the total fraction)

[1]Washington Water Quality Standards: WAC Chapter 173-201A-240 (December 2019)

[2] MTCA: WAC Chapter 173-340-730 (February 2021)

Abbreviations:

µg/L = micrograms per liter
AES = Atomic Emissions Spectrometry
CaCO3 = calcium carbonate
CAS = Chemical Abstracts Service
CVAA = Cold Vapor Atomic Absorption
FD = Field Duplicate
FS = Field Sample
ICP = Inductively Coupled Plasma
J = estimated concentration
mg/L = milligrams per liter
MS = Mass Spectrometry
MTCA = Model Toxics Control Act
U = The analyte was not detected at or above the reported value
USEPA = U.S. Environmental Protection Agency
WAC = Washington Administrative Code

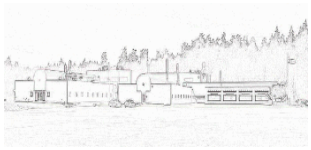
Table 4
Sediment Analytical Results Summary

Analyte	CAS.NO	Units	Washington SMS[1]		Station Sample ID Date Type	Background			3X Background Sample KRRC-SE02	KRRC-SE03 21214452 5/21/2021 FS	KRRC-SE03 21214456 5/21/2021 FD	KRRC-SE04 21214453 5/21/2021 FS	KRRC-SE05 21214454 5/21/2021 FS
			Freshwater Sediment - SCO	Freshwater Sediment - CSL		KRRC-SE01 21214450 5/21/2021 FS	KRRC-SE02 21214451 5/21/2021 FS	KRRC-SE06 21214455 5/21/2021 FS					
Metals (ICP-AES SW-846 6010D)													
Aluminum	7429-90-5	mg/kg	--	--	--	**15100**	**13600**	**7570**	40800	**18400**	**17500**	**12400**	**9130**
Antimony	7440-36-0	mg/kg	--	--	--	2 UJ	1.9 UJ	1.9 UJ	1.9	2 UJ	2 UJ	1.8 UJ	2 UJ
Arsenic	7440-38-2	mg/kg	14	120	--	**2.5**	2.3 U	2.3 U	2.3	2.5 U	2.5 U	2.3 U	2.5 U
Barium	7440-39-3	mg/kg	--	--	--	**58**	**19.9**	**63.6**	59.7	**60.7**	**54.5**	**33.2**	**21.2**
Beryllium	7440-41-7	mg/kg	--	--	--	**0.28**	**0.47**	**0.21**	1.41	**0.41**	**0.39**	**0.29**	**0.16**
Cadmium	7440-43-9	mg/kg	2.1	5.4	--	0.2 U	0.94 U	0.19 U	0.94	**0.24**	**0.2**	0.18 U	0.2 U
Calcium	7440-70-2	mg/kg	--	--	--	**3870 J (4954)**	**3960 J (5069)**	**4020 J (5146)**	11880	**3340 J (2609)**	**3450 J (2695)**	**2990 J (2336)**	**3860 J (3016)**
Chromium	7440-47-3	mg/kg	72	88	--	**30.8**	**18.2**	**13.5**	54.6	**27.4**	**25.9**	**26.3**	**24**
Cobalt	7440-48-4	mg/kg	--	--	--	**9.53**	**3.55**	**1.3**	10.65	**6.33**	**6.43**	**5.06**	**3.49**
Copper	7440-50-8	mg/kg	400	1200	--	**20.6**	**9.73**	**5.58**	29.19	**16.9**	**16.5**	**7.45**	**8.77**
Iron	7439-89-6	mg/kg	--	--	--	**17200**	**11000**	**3780**	33000	**8430**	**8910**	**14100**	**10500**
Lead	7439-92-1	mg/kg	360	--	--	**58.4**	**4.7**	**11.9**	14.1	**75.6**	**69.6**	**13.6**	**21.6**
Magnesium	7439-95-4	mg/kg	--	--	--	**5690**	**3100**	**1040**	9300	**2050**	**2300**	**3900**	**3760**
Manganese	7439-96-5	mg/kg	--	--	--	**507 J (629)**	**136 J (169)**	**67.9 J (84)**	507	**798 J (644)**	**738 J (595)**	**234 J (189)**	**142 J (115)**
Nickel	7440-02-0	mg/kg	26	110	--	**44.3**	**18.4**	**12.5**	55.2	**20.7**	**20.9**	**22.7**	**23.4**
Potassium	7440-09-7	mg/kg	--	--	--	**280**	330 U	**180**	330	**230**	**230**	**180**	**200**
Selenium	7782-49-2	mg/kg	11	--	--	4.9 U	4.7 U	4.7 U	4.7	4.9 U	4.9 U	4.5 U	5.1 U
Silver	7440-22-4	mg/kg	0.57	1.7	--	0.99 U	0.94 U	0.93 U	0.94	0.99 U	0.99 U	0.91 U	1 U
Sodium	7440-23-5	mg/kg	--	--	--	**181**	**71**	**70.5**	213	**82.1**	**90.4**	**64.1**	**73.1**
Thallium	7440-28-0	mg/kg	--	--	--	4.9 U	4.7 U	4.7 U	4.7	4.9 U	4.9 U	4.5 U	5.1 U
Vanadium	7440-62-2	mg/kg	--	--	--	**50.5**	**32.7**	**13.6**	98.1	**29.4**	**30**	**44.1**	**32.7**
Zinc	7440-66-6	mg/kg	3200	--	--	**49.4**	**18.7**	**5.99**	56.1	**43.5**	**40.7**	**23.8**	**24**
Mercury (CVAA SW-846 7471B)													
Mercury	7439-97-6	mg/kg	0.66	0.8	--	**0.05**	**0.05**	**0.03**	0.15	**0.08**	**0.08**	**0.02**	**0.03**
Polycyclic Aromatic Hydrocarbons (SW-846 8270E)													
9H-Fluorene	86-73-7	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Acenaphthene	83-32-9	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Acenaphthylene	208-96-8	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Anthracene	120-12-7	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Benzo(a)anthracene	56-55-3	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Benzo(a)pyrene	50-32-8	µg/kg	--	--	--	**52**	49 U	49 U	49	50 U	50 U	34 U	49 U
Benzo(g,h,i)perylene	191-24-2	µg/kg	--	--	--	**40**	49 U	49 U	49	50 U	50 U	34 U	49 U
Benzo[b]Fluoranthene	205-99-2	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Benzo[k]fluoranthene	207-08-9	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Chrysene	218-01-9	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Dibenzo[a,h]anthracene	53-70-3	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Dibenzofuran	132-64-9	µg/kg	200	680	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Fluoranthene	206-44-0	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Naphthalene	91-20-3	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Naphthalene, 2-methyl-	91-57-6	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Phenanthrene	85-01-8	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U
Pyrene	129-00-0	µg/kg	--	--	--	33 U	49 U	49 U	49	50 U	50 U	34 U	49 U

Notes:
= Analyte concentrations exceed three times the selected background concentration
= Analyte concentrations exceed the screening value
BOLD = Analyte was detected
(2609) = Adjusted value for J qualified data based on reported bias
-- = No benchmark estabished
[1]Washington Sediment Management Standards: Chapter 173-204 Washington Administrative Code (December 2019)

Abbreviations:
µg/kg = micrograms per kilogram
AES = Atomic Emissions Spectrometry
CAS = Chemical Abstracts Service
CSL = Cleanup Screening Level
CVAA = Cold Vapor Atomic Absorption
FD = Field Duplicate
FS = Field Sample
ICP = Inductively Coupled Plasma
J = estimated concentration
mg/kg = milligrams per kilogram
SCO = Sediment Cleanup Objective
SMS = Sediment Management Standards
U = The analyte was not detected at or above the reported value
UJ = The analyte was not detected at or above the reported value. The reported value isan estimate.

ATTACHMENT C
LABORATORY ANALTYICAL RESULTS



US EPA Region 10 Laboratory

Multi-Sample Final Report

Project Code : SFP-174A
Site : KITSAP RIFLE & REVOLVER
Contact : Brandon Perkins
Account : 2021T10P000FD210ZZLA00

Parameter(s): **Hardness**

Analyte: ***90080 - Hardness as CaCO3**
Weight Basis : N/A

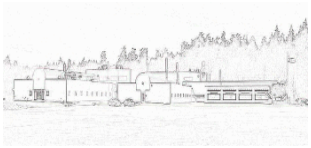
Prep Method(s): 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analytical Method: SM2340B - Hardness by Calculation, Standard Methods

Target Analyte Results:

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214459 sam	KRRC-SW02	Water	**15.1**	**mg/L**		6/7/21	2
21214461 sam	KRRC-SW03	Water	**11.3**	**mg/L**		6/7/21	2
21214463 sam	KRRC-SW04	Water	**13.8**	**mg/L**		6/7/21	2
21214465 sam	KRRC-SW05	Water	**18.3**	**mg/L**		6/7/21	2
21214467 sam	KRRC-SW06	Water	**15.6**	**mg/L**		6/7/21	2
21214469 sam	KRRC-SW04	Water	**13.0**	**mg/L**		6/7/21	2
21214461 du	KRRC-SW03	Water	**11.2**	**mg/L**		6/7/21	2
IW060121ABL blk	Blank	Liquid	0.30	mg/L	U	6/7/21	2

Spiked Compounds:

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214461 ms	KRRC-SW03	Water	97	%Rec		6/7/21	2
21214461 msd	KRRC-SW03	Water	102	%Rec		6/7/21	2
IW060121AL1 lcs	Lab Control Standard	Liquid	95	%Rec		6/7/21	2



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-174A
Site : KITSAP RIFLE & REVOLVER
Contact : Brandon Perkins
Account : 2021T10P000FD210ZZLA00

Sample : 21214450

Information : KRRC-SE01
Matrix : Sediment
Collected : 5/21/2021 2:30:00PM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15100**	**mg/Kg**		6/15/21	1
7440360	Antimony	2.0	mg/Kg	UJ	6/15/21	1
7440382	**Arsenic**	**2.5**	**mg/Kg**		6/15/21	1
7440393	**Barium**	**58.0**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.28**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.20	mg/Kg	U	6/15/21	1
7440702	**Calcium**	**3870**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**30.8**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**9.53**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**20.6**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**17200**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**58.4**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**5690**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**507**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**44.3**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**280**	**mg/Kg**		6/15/21	1
7782492	Selenium	4.9	mg/Kg	U	6/15/21	1
7440224	Silver	0.99	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**181**	**mg/Kg**		6/15/21	1
7440280	Thallium	4.9	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**50.5**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**49.4**	**mg/Kg**		6/15/21	1

Sample : 21214451

Information : KRRC-SE02
Matrix : Sediment
Collected : 5/21/2021 1:15:00PM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**13600**	**mg/Kg**		6/15/21	5
7440360	Antimony	1.9	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.3	mg/Kg	U	6/15/21	1
7440393	**Barium**	**19.9**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.470**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.94	mg/Kg	U	6/15/21	5
7440702	**Calcium**	**3960**	**mg/Kg**	J	6/15/21	5
7440473	**Chromium**	**18.2**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**3.55**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**9.73**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**11000**	**mg/Kg**		6/15/21	5
7439921	**Lead**	**4.7**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**3100**	**mg/Kg**		6/15/21	5
7439965	**Manganese**	**136**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**18.4**	**mg/Kg**		6/15/21	5
7440097	Potassium	330	mg/Kg	U	6/15/21	5
7782492	Selenium	4.7	mg/Kg	U	6/15/21	1
7440224	Silver	0.94	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**71**	**mg/Kg**		6/15/21	5
7440280	Thallium	4.7	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**32.7**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**18.7**	**mg/Kg**		6/15/21	5

Sample : 21214452

Information : KRRC-SE03
Matrix : Sediment
Collected : 5/21/2021 10:05:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**18400**	**mg/Kg**		6/15/21	1
7440360	Antimony	2.0	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.5	mg/Kg	U	6/15/21	1
7440393	**Barium**	**60.7**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.41**	**mg/Kg**		6/15/21	1
7440439	**Cadmium**	**0.24**	**mg/Kg**		6/15/21	1
7440702	**Calcium**	**3340**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**27.4**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**6.33**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**16.9**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**8430**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**75.6**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**2050**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**798**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**20.7**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**230**	**mg/Kg**		6/15/21	1
7782492	Selenium	4.9	mg/Kg	U	6/15/21	1
7440224	Silver	0.99	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**82.1**	**mg/Kg**		6/15/21	1
7440280	Thallium	4.9	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**29.4**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**43.5**	**mg/Kg**		6/15/21	1

Sample : 21214453

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**12400**	**mg/Kg**		6/15/21	1
7440360	Antimony	1.8	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.3	mg/Kg	U	6/15/21	1
7440393	**Barium**	**33.2**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.29**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.18	mg/Kg	U	6/15/21	1
7440702	**Calcium**	**2990**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**26.3**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**5.06**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**7.45**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**14100**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**13.6**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**3900**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**234**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**22.7**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**180**	**mg/Kg**		6/15/21	1
7782492	Selenium	4.5	mg/Kg	U	6/15/21	1
7440224	Silver	0.91	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**64.1**	**mg/Kg**		6/15/21	1
7440280	Thallium	4.5	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**44.1**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**23.8**	**mg/Kg**		6/15/21	1

Sample : 21214454

Information : KRRC-SE05
Matrix : Sediment
Collected : 5/21/2021 8:30:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**9130**	**mg/Kg**		6/15/21	1
7440360	Antimony	2.0	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.5	mg/Kg	U	6/15/21	1
7440393	**Barium**	**21.2**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.16**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.20	mg/Kg	U	6/15/21	1
7440702	**Calcium**	**3860**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**24.0**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**3.49**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**8.77**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**10500**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**21.6**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**3760**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**142**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**23.4**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**200**	**mg/Kg**		6/15/21	1
7782492	Selenium	5.1	mg/Kg	U	6/15/21	1
7440224	Silver	1.0	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**73.1**	**mg/Kg**		6/15/21	1
7440280	Thallium	5.1	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**32.7**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**24.0**	**mg/Kg**		6/15/21	1

Sample : 21214455

Information : KRRC-SE06
Matrix : Sediment
Collected : 5/21/2021 12:35:00PM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**7570**	**mg/Kg**		6/15/21	1
7440360	Antimony	1.9	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.3	mg/Kg	U	6/15/21	1
7440393	**Barium**	**63.6**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.21**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.19	mg/Kg	U	6/15/21	1
7440702	**Calcium**	**4020**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**13.5**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**1.3**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**5.58**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**3780**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**11.9**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**1040**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**67.9**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**12.5**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**180**	**mg/Kg**		6/15/21	1
7782492	Selenium	4.7	mg/Kg	U	6/15/21	1
7440224	Silver	0.93	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**70.5**	**mg/Kg**		6/15/21	1
7440280	Thallium	4.7	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**13.6**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**5.99**	**mg/Kg**		6/15/21	1

Sample : 21214456

Information : KRRC-SE03
Matrix : Sediment
Collected : 5/21/2021 11:30:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17500**	**mg/Kg**		6/15/21	1
7440360	Antimony	2.0	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.5	mg/Kg	U	6/15/21	1
7440393	**Barium**	**54.5**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.39**	**mg/Kg**		6/15/21	1
7440439	**Cadmium**	**0.20**	**mg/Kg**		6/15/21	1
7440702	**Calcium**	**3450**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**25.9**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**6.43**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**16.5**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**8910**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**69.6**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**2300**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**738**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**20.9**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**230**	**mg/Kg**		6/15/21	1
7782492	Selenium	4.9	mg/Kg	U	6/15/21	1
7440224	Silver	0.99	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**90.4**	**mg/Kg**		6/15/21	1
7440280	Thallium	4.9	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**30.0**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**40.7**	**mg/Kg**		6/15/21	1

Sample : 21214459

Information : KRRC-SW02
Matrix : Water
Collected : 5/21/2021 1:15:00PM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.28**	**ug/L**		6/16/21	2
7440439	**Cadmium**	**0.059**	**ug/L**		6/16/21	2
7440508	**Copper**	**1.20**	**ug/L**		6/16/21	2
7439921	**Lead**	**4.97**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**646**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**15.1**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**3810**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**1310**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1350**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**233**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1840**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**8.2**	**ug/L**		6/ 7/21	2

Sample : 21214460

Information : KRRC-SW02
Matrix : Filtered
Collected : 5/21/2021 1:15:00PM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.25**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.11**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**3.4**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2930**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**101**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1200**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**49.1**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1930**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214461

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.43**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**1.72**	**ug/L**		6/16/21	2
7439921	**Lead**	**4.61**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**789**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**9.82**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2820**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**554**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1040**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**397**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1640**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**5.7**	**ug/L**		6/ 7/21	2

Sample : 21214462

Information : KRRC-SW03
Matrix : Filtered
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.32**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**1.03**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.907**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**130**	**ug/L**		6/ 7/21	2
7440393	**Barium**	**4.9**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2540**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**228**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**945**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**168**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1610**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214463

Information : KRRC-SW04
Matrix : Water
Collected : 5/21/2021 9:40:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.28**	**ug/L**		6/16/21	2
7440439	**Cadmium**	**0.074**	**ug/L**		6/16/21	2
7440508	**Copper**	**0.81**	**ug/L**		6/16/21	2
7439921	**Lead**	**1.91**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**490**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**29.1**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**3320**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**509**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1330**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**2360**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2890**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**19**	**ug/L**		6/ 7/21	2

Sample : 21214464

Information : KRRC-SW04
Matrix : Filtered
Collected : 5/21/2021 9:40:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.51**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.585**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**7.85**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2930**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**190**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1180**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**299**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2680**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**16**	**ug/L**		6/ 7/21	2

Sample : 21214465

Information : KRRC-SW05
Matrix : Water
Collected : 5/21/2021 8:30:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	Copper	0.20	ug/L	U	6/16/21	2
7439921	**Lead**	**0.20**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**4.8**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**4540**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**153**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1680**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**123**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2760**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214466

Information : KRRC-SW05
Matrix : Filtered
Collected : 5/21/2021 8:30:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.32**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.076**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**4.9**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**4790**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**83**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1760**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**93.3**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2890**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214467

Information : KRRC-SW06
Matrix : Water
Collected : 5/21/2021 12:35:00PM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.23**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**1.52**	**ug/L**		6/16/21	2
7439921	**Lead**	**5.89**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**664**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**16.1**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**4370**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**472**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1150**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**51.8**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1910**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**5.9**	**ug/L**		6/ 7/21	2

Sample : 21214468

Information : KRRC-SW06
Matrix : Filtered
Collected : 5/21/2021 12:35:00PM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.35**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.14**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**3.6**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2420**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**71**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**865**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**13.0**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1840**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214469

Information : KRRC-SW04
Matrix : Water
Collected : 5/21/2021 11:05:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.24**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.70**	**ug/L**		6/16/21	2
7439921	**Lead**	**1.28**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**320**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**22.2**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**3140**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**373**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1260**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**1530**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2780**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**14**	**ug/L**		6/ 7/21	2

Sample : 21214470

Information : KRRC-SW04
Matrix : Filtered
Collected : 5/21/2021 11:05:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**0.43**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.487**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	**Barium**	**9.17**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**3020**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**167**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1220**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**250**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**2810**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**6.4**	**ug/L**		6/ 7/21	2

Sample : 21214453 Sample Duplicate

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11800**	**mg/Kg**		6/15/21	1
7440360	Antimony	2.1	mg/Kg	UJ	6/15/21	1
7440382	Arsenic	2.6	mg/Kg	U	6/15/21	1
7440393	**Barium**	**30.2**	**mg/Kg**		6/15/21	1
7440417	**Beryllium**	**0.28**	**mg/Kg**		6/15/21	1
7440439	Cadmium	0.21	mg/Kg	U	6/15/21	1
7440702	**Calcium**	**3110**	**mg/Kg**	J	6/15/21	1
7440473	**Chromium**	**26.8**	**mg/Kg**		6/15/21	1
7440484	**Cobalt**	**4.40**	**mg/Kg**		6/15/21	1
7440508	**Copper**	**7.26**	**mg/Kg**		6/15/21	1
7439896	**Iron**	**13100**	**mg/Kg**		6/15/21	1
7439921	**Lead**	**13.7**	**mg/Kg**		6/15/21	1
7439954	**Magnesium**	**3500**	**mg/Kg**		6/15/21	1
7439965	**Manganese**	**218**	**mg/Kg**	J	6/15/21	1
7440020	**Nickel**	**22.4**	**mg/Kg**		6/15/21	1
7440097	**Potassium**	**180**	**mg/Kg**		6/15/21	1
7782492	Selenium	5.2	mg/Kg	U	6/15/21	1
7440224	Silver	1.0	mg/Kg	U	6/15/21	1
7440235	**Sodium**	**63.0**	**mg/Kg**		6/15/21	1
7440280	Thallium	5.2	mg/Kg	U	6/15/21	1
7440622	**Vanadium**	**42.5**	**mg/Kg**		6/15/21	1
7440666	**Zinc**	**22.6**	**mg/Kg**		6/15/21	1

Sample : 21214461 Sample Duplicate

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.41**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**1.69**	**ug/L**		6/16/21	2
7439921	**Lead**	**4.72**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**788**	**ug/L**	J	6/ 7/21	2
7440393	**Barium**	**9.76**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2800**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**551**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**1040**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**398**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1640**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	**Zinc**	**5.6**	**ug/L**		6/ 7/21	2

Sample : 21214462 Sample Duplicate

Information : KRRC-SW03
Matrix : Filtered
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	**Arsenic**	**0.35**	**ug/L**		6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	**Copper**	**1.00**	**ug/L**		6/16/21	2
7439921	**Lead**	**0.899**	**ug/L**		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**130**	**ug/L**		6/ 7/21	2
7440393	**Barium**	**4.9**	**ug/L**		6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	**Calcium**	**2540**	**ug/L**		6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	**Iron**	**227**	**ug/L**		6/ 7/21	2
7439954	**Magnesium**	**944**	**ug/L**		6/ 7/21	2
7439965	**Manganese**	**169**	**ug/L**		6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	**Sodium**	**1620**	**ug/L**		6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : 21214453 Matrix Spike

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	6/15/21	1
7440360	Antimony	44	%Rec		6/15/21	1
7440382	Arsenic	101	%Rec		6/15/21	1
7440393	Barium	94	%Rec		6/15/21	1
7440417	Beryllium	95	%Rec		6/15/21	1
7440439	Cadmium	85	%Rec		6/15/21	1
7440702	Calcium	129	%Rec		6/15/21	1
7440473	Chromium	102	%Rec		6/15/21	1
7440484	Cobalt	92	%Rec		6/15/21	1
7440508	Copper	97	%Rec		6/15/21	1
7439896	Iron			NA	6/15/21	1
7439921	Lead	91	%Rec		6/15/21	1
7439954	Magnesium	90	%Rec		6/15/21	1
7439965	Manganese	106	%Rec		6/15/21	1
7440020	Nickel	85	%Rec		6/15/21	1
7440097	Potassium	96	%Rec		6/15/21	1
7782492	Selenium	93	%Rec		6/15/21	1
7440224	Silver	94	%Rec		6/15/21	1
7440235	Sodium	91	%Rec		6/15/21	1
7440280	Thallium	98	%Rec		6/15/21	1
7440622	Vanadium	101	%Rec		6/15/21	1
7440666	Zinc	85	%Rec		6/15/21	1

Sample : 21214461 Matrix Spike

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7440360	Antimony	94	%Rec		6/16/21	2
7440382	Arsenic	100	%Rec		6/16/21	2
7440439	Cadmium	99	%Rec		6/16/21	2
7440508	Copper	99	%Rec		6/16/21	2
7439921	Lead	110	%Rec		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	118	%Rec		6/ 7/21	2
7440393	Barium	99	%Rec		6/ 7/21	2
7440417	Beryllium	100	%Rec		6/ 7/21	2
7440702	Calcium	97	%Rec		6/ 7/21	2
7440473	Chromium	96	%Rec		6/ 7/21	2
7440484	Cobalt	97	%Rec		6/ 7/21	2
7439896	Iron	110	%Rec		6/ 7/21	2
7439954	Magnesium	96	%Rec		6/ 7/21	2
7439965	Manganese	101	%Rec		6/ 7/21	2
7440020	Nickel	97	%Rec		6/ 7/21	2
7440097	Potassium	101	%Rec		6/ 7/21	2
7782492	Selenium	103	%Rec		6/ 7/21	2
7440224	Silver	94	%Rec		6/ 7/21	2
7440235	Sodium	96	%Rec		6/ 7/21	2
7440280	Thallium	100	%Rec		6/ 7/21	2
7440622	Vanadium	99	%Rec		6/ 7/21	2
7440666	Zinc	101	%Rec		6/ 7/21	2

Sample : 21214462 Matrix Spike

Information : KRRC-SW03
Matrix : Filtered
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7440360	Antimony	100	%Rec		6/16/21	2
7440382	Arsenic	100	%Rec		6/16/21	2
7440439	Cadmium	99	%Rec		6/16/21	2
7440508	Copper	100	%Rec		6/16/21	2
7439921	Lead	109	%Rec		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	103	%Rec		6/ 7/21	2
7440393	Barium	99	%Rec		6/ 7/21	2
7440417	Beryllium	100	%Rec		6/ 7/21	2
7440702	Calcium	96	%Rec		6/ 7/21	2
7440473	Chromium	95	%Rec		6/ 7/21	2
7440484	Cobalt	99	%Rec		6/ 7/21	2
7439896	Iron	101	%Rec		6/ 7/21	2
7439954	Magnesium	96	%Rec		6/ 7/21	2
7439965	Manganese	94	%Rec		6/ 7/21	2
7440020	Nickel	100	%Rec		6/ 7/21	2
7440097	Potassium	101	%Rec		6/ 7/21	2
7782492	Selenium	106	%Rec		6/ 7/21	2
7440224	Silver	94	%Rec		6/ 7/21	2
7440235	Sodium	95	%Rec		6/ 7/21	2
7440280	Thallium	103	%Rec		6/ 7/21	2
7440622	Vanadium	98	%Rec		6/ 7/21	2
7440666	Zinc	104	%Rec		6/ 7/21	2

Sample : 21214453 Matrix Spike#2

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	6/15/21	1
7440360	Antimony	43	%Rec		6/15/21	1
7440382	Arsenic	101	%Rec		6/15/21	1
7440393	Barium	87	%Rec		6/15/21	1
7440417	Beryllium	96	%Rec		6/15/21	1
7440439	Cadmium	84	%Rec		6/15/21	1
7440702	Calcium	143	%Rec		6/15/21	1
7440473	Chromium	99	%Rec		6/15/21	1
7440484	Cobalt	90	%Rec		6/15/21	1
7440508	Copper	99	%Rec		6/15/21	1
7439896	Iron			NA	6/15/21	1
7439921	Lead	89	%Rec		6/15/21	1
7439954	Magnesium	87	%Rec		6/15/21	1
7439965	Manganese	138	%Rec		6/15/21	1
7440020	Nickel	83	%Rec		6/15/21	1
7440097	Potassium	93	%Rec		6/15/21	1
7782492	Selenium	90	%Rec		6/15/21	1
7440224	Silver	93	%Rec		6/15/21	1
7440235	Sodium	89	%Rec		6/15/21	1
7440280	Thallium	97	%Rec		6/15/21	1
7440622	Vanadium	123	%Rec		6/15/21	1
7440666	Zinc	84	%Rec		6/15/21	1

Sample : 21214461 Matrix Spike#2

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7440360	Antimony	92	%Rec		6/16/21	2
7440382	Arsenic	99	%Rec		6/16/21	2
7440439	Cadmium	98	%Rec		6/16/21	2
7440508	Copper	96	%Rec		6/16/21	2
7439921	Lead	108	%Rec		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	128	%Rec		6/ 7/21	2
7440393	Barium	104	%Rec		6/ 7/21	2
7440417	Beryllium	105	%Rec		6/ 7/21	2
7440702	Calcium	103	%Rec		6/ 7/21	2
7440473	Chromium	100	%Rec		6/ 7/21	2
7440484	Cobalt	102	%Rec		6/ 7/21	2
7439896	Iron	123	%Rec		6/ 7/21	2
7439954	Magnesium	102	%Rec		6/ 7/21	2
7439965	Manganese	116	%Rec		6/ 7/21	2
7440020	Nickel	103	%Rec		6/ 7/21	2
7440097	Potassium	106	%Rec		6/ 7/21	2
7782492	Selenium	108	%Rec		6/ 7/21	2
7440224	Silver	97	%Rec		6/ 7/21	2
7440235	Sodium	101	%Rec		6/ 7/21	2
7440280	Thallium	105	%Rec		6/ 7/21	2
7440622	Vanadium	103	%Rec		6/ 7/21	2
7440666	Zinc	106	%Rec		6/ 7/21	2

Sample : 21214462 Matrix Spike#2

Information : KRRC-SW03
Matrix : Filtered
Collected : 5/21/2021 10:05:00AM

Parameter : ICP/MS
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7440360	Antimony	100	%Rec		6/16/21	2
7440382	Arsenic	100	%Rec		6/16/21	2
7440439	Cadmium	101	%Rec		6/16/21	2
7440508	Copper	99	%Rec		6/16/21	2
7439921	Lead	110	%Rec		6/16/21	2

Parameter : ICP-AES
Fraction : Dissolved
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	107	%Rec		6/ 7/21	2
7440393	Barium	103	%Rec		6/ 7/21	2
7440417	Beryllium	105	%Rec		6/ 7/21	2
7440702	Calcium	101	%Rec		6/ 7/21	2
7440473	Chromium	100	%Rec		6/ 7/21	2
7440484	Cobalt	100	%Rec		6/ 7/21	2
7439896	Iron	105	%Rec		6/ 7/21	2
7439954	Magnesium	100	%Rec		6/ 7/21	2
7439965	Manganese	99	%Rec		6/ 7/21	2
7440020	Nickel	101	%Rec		6/ 7/21	2
7440097	Potassium	103	%Rec		6/ 7/21	2
7782492	Selenium	106	%Rec		6/ 7/21	2
7440224	Silver	95	%Rec		6/ 7/21	2
7440235	Sodium	99	%Rec		6/ 7/21	2
7440280	Thallium	104	%Rec		6/ 7/21	2
7440622	Vanadium	103	%Rec		6/ 7/21	2
7440666	Zinc	105	%Rec		6/ 7/21	2

Sample : IS061421ABL Blank

Information : Blank
Matrix : Solid

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	6/15/21	1
7440360	Antimony	2.0	mg/Kg	U	6/15/21	1
7440382	Arsenic	2.5	mg/Kg	U	6/15/21	1
7440393	Barium	0.10	mg/Kg	U	6/15/21	1
7440417	Beryllium	0.10	mg/Kg	U	6/15/21	1
7440439	Cadmium	0.20	mg/Kg	U	6/15/21	1
7440702	Calcium	5.0	mg/Kg	U	6/15/21	1
7440473	Chromium	0.50	mg/Kg	U	6/15/21	1
7440484	Cobalt	0.50	mg/Kg	U	6/15/21	1
7440508	Copper	0.50	mg/Kg	U	6/15/21	1
7439896	Iron	5.0	mg/Kg	U	6/15/21	1
7439921	Lead	2.5	mg/Kg	U	6/15/21	1
7439954	Magnesium	5.0	mg/Kg	U	6/15/21	1
7439965	Manganese	0.20	mg/Kg	U	6/15/21	1
7440020	Nickel	0.50	mg/Kg	U	6/15/21	1
7440097	Potassium	70	mg/Kg	U	6/15/21	1
7782492	Selenium	5.0	mg/Kg	U	6/15/21	1
7440224	Silver	1.0	mg/Kg	U	6/15/21	1
7440235	Sodium	10	mg/Kg	U	6/15/21	1
7440280	Thallium	5.0	mg/Kg	U	6/15/21	1
7440622	Vanadium	0.50	mg/Kg	U	6/15/21	1
7440666	Zinc	2.0	mg/Kg	U	6/15/21	1

Sample : IW060121ABL Blank

Information : Blank
Matrix : Liquid

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7440360	Antimony	0.50	ug/L	U	6/16/21	2
7440382	Arsenic	0.20	ug/L	U	6/16/21	2
7440439	Cadmium	0.050	ug/L	U	6/16/21	2
7440508	Copper	0.20	ug/L	U	6/16/21	2
7439921	Lead	0.050	ug/L	U	6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	100	ug/L	U	6/ 7/21	2
7440393	Barium	1.0	ug/L	U	6/ 7/21	2
7440417	Beryllium	1.0	ug/L	U	6/ 7/21	2
7440702	Calcium	50	ug/L	U	6/ 7/21	2
7440473	Chromium	5.0	ug/L	U	6/ 7/21	2
7440484	Cobalt	5.0	ug/L	U	6/ 7/21	2
7439896	Iron	20	ug/L	U	6/ 7/21	2
7439954	Magnesium	50	ug/L	U	6/ 7/21	2
7439965	Manganese	2.0	ug/L	U	6/ 7/21	2
7440020	Nickel	5.0	ug/L	U	6/ 7/21	2
7440097	Potassium	700	ug/L	U	6/ 7/21	2
7782492	Selenium	50	ug/L	U	6/ 7/21	2
7440224	Silver	10	ug/L	U	6/ 7/21	2
7440235	Sodium	100	ug/L	U	6/ 7/21	2
7440280	Thallium	50	ug/L	U	6/ 7/21	2
7440622	Vanadium	5.0	ug/L	U	6/ 7/21	2
7440666	Zinc	5.0	ug/L	U	6/ 7/21	2

Sample : IS061421AL1 Lab Control Std

Information : Lab Control Standard
Matrix : Solid

Parameter : ICP-AES
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	100	%Rec		6/15/21	1
7440360	Antimony	98	%Rec		6/15/21	1
7440382	Arsenic	99	%Rec		6/15/21	1
7440393	Barium	101	%Rec		6/15/21	1
7440417	Beryllium	94	%Rec		6/15/21	1
7440439	Cadmium	95	%Rec		6/15/21	1
7440702	Calcium	98	%Rec		6/15/21	1
7440473	Chromium	94	%Rec		6/15/21	1
7440484	Cobalt	96	%Rec		6/15/21	1
7440508	Copper	94	%Rec		6/15/21	1
7439896	Iron	103	%Rec		6/15/21	1
7439921	Lead	97	%Rec		6/15/21	1
7439954	Magnesium	99	%Rec		6/15/21	1
7439965	Manganese	91	%Rec		6/15/21	1
7440020	Nickel	96	%Rec		6/15/21	1
7440097	Potassium	98	%Rec		6/15/21	1
7782492	Selenium	99	%Rec		6/15/21	1
7440224	Silver	93	%Rec		6/15/21	1
7440235	Sodium	95	%Rec		6/15/21	1
7440280	Thallium	99	%Rec		6/15/21	1
7440622	Vanadium	97	%Rec		6/15/21	1
7440666	Zinc	97	%Rec		6/15/21	1

Sample : IW060121AL1 Lab Control Std

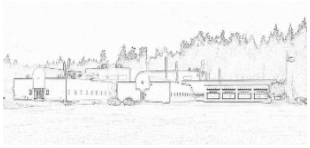
Information : Lab Control Standard
Matrix : Liquid

Parameter : ICP/MS
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.8 - ICPMS 18 Elements
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7440360	Antimony	99	%Rec		6/16/21	2
7440382	Arsenic	100	%Rec		6/16/21	2
7440439	Cadmium	99	%Rec		6/16/21	2
7440508	Copper	97	%Rec		6/16/21	2
7439921	Lead	110	%Rec		6/16/21	2

Parameter : ICP-AES
Fraction : Total
Prep Method: 200.2 - Metals, total recoverable, water, soil, EMSL-CIN
Analysis Method: 200.7 - ICP Inductively Coupled Plasma-Atomic Emission Spectroscopy (22 elements)
Weight Basis : N/A

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	100	%Rec		6/ 7/21	2
7440393	Barium	96	%Rec		6/ 7/21	2
7440417	Beryllium	98	%Rec		6/ 7/21	2
7440702	Calcium	95	%Rec		6/ 7/21	2
7440473	Chromium	94	%Rec		6/ 7/21	2
7440484	Cobalt	97	%Rec		6/ 7/21	2
7439896	Iron	97	%Rec		6/ 7/21	2
7439954	Magnesium	95	%Rec		6/ 7/21	2
7439965	Manganese	95	%Rec		6/ 7/21	2
7440020	Nickel	99	%Rec		6/ 7/21	2
7440097	Potassium	96	%Rec		6/ 7/21	2
7782492	Selenium	105	%Rec		6/ 7/21	2
7440224	Silver	91	%Rec		6/ 7/21	2
7440235	Sodium	96	%Rec		6/ 7/21	2
7440280	Thallium	102	%Rec		6/ 7/21	2
7440622	Vanadium	97	%Rec		6/ 7/21	2
7440666	Zinc	103	%Rec		6/ 7/21	2



US EPA Region 10 Laboratory

Multi-Sample Final Report

Project Code : SFP-174A
Site : KITSAP RIFLE & REVOLVER
Contact : Brandon Perkins
Account : 2021T10P000FD210ZZLA00

Parameter(s): **Hg**

Analyte: **7439976 - Mercury**
Weight Basis : N/A

Prep Method(s): 245.1 - Cold vapor mercury in water
Analytical Method: 245.1 - Cold vapor mercury in water (CVAAS)

Target Analyte Results:

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214459 sam	KRRC-SW02	Water	0.050	ug/L	U	5/27/21	1
21214460 sam	KRRC-SW02	Filtered	0.050	ug/L	U	5/27/21	1
21214461 sam	KRRC-SW03	Water	0.050	ug/L	U	5/27/21	1
21214462 sam	KRRC-SW03	Filtered	0.050	ug/L	U	5/27/21	1
21214463 sam	KRRC-SW04	Water	0.050	ug/L	U	5/27/21	1
21214464 sam	KRRC-SW04	Filtered	0.050	ug/L	U	5/27/21	1
21214465 sam	KRRC-SW05	Water	0.050	ug/L	U	5/27/21	1
21214466 sam	KRRC-SW05	Filtered	0.050	ug/L	U	5/27/21	1
21214467 sam	KRRC-SW06	Water	**0.0512**	**ug/L**		5/27/21	1
21214468 sam	KRRC-SW06	Filtered	0.050	ug/L	U	5/27/21	1
21214469 sam	KRRC-SW04	Water	0.050	ug/L	U	5/27/21	1
21214470 sam	KRRC-SW04	Filtered	0.050	ug/L	U	5/27/21	1
21214461 du	KRRC-SW03	Water	0.050	ug/L	U	5/27/21	1
21214462 du	KRRC-SW03	Filtered	0.050	ug/L	U	5/27/21	1
IW052621ABL blk	Blank	Liquid	0.050	ug/L	U	5/27/21	1

Spiked Compounds:

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214461 ms	KRRC-SW03	Water	105	%Rec		5/27/21	1
21214462 ms	KRRC-SW03	Filtered	99	%Rec		5/27/21	1
21214461 msd	KRRC-SW03	Water	105	%Rec		5/27/21	1
21214462 msd	KRRC-SW03	Filtered	101	%Rec		5/27/21	1
IW052621AL1 lcs	Lab Control Standard	Liquid	98	%Rec		5/27/21	1

Analyte: **7439976 - Mercury**
Weight Basis : Dry

Prep Method(s): 7471B - Mercury: Manual Cold Vapor - Solid/Semisolid Waste, SW-846
Analytical Method: 7471B - Mercury: Manual Cold Vapor - Solid/Semisolid Waste, SW-846

Target Analyte Results:

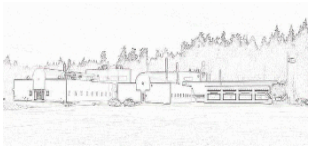
Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214450 sam	KRRC-SE01	Sediment	**0.0515**	**mg/Kg**		5/25/21	1

Target Analyte Results (cont.):

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214451 sam	KRRC-SE02	Sediment	**0.0532**	**mg/Kg**		5/25/21	1
21214452 sam	KRRC-SE03	Sediment	**0.0822**	**mg/Kg**		5/25/21	1
21214453 sam	KRRC-SE04	Sediment	**0.0278**	**mg/Kg**		5/25/21	1
21214454 sam	KRRC-SE05	Sediment	**0.0335**	**mg/Kg**		5/25/21	1
21214455 sam	KRRC-SE06	Sediment	**0.0380**	**mg/Kg**		5/25/21	1
21214456 sam	KRRC-SE03	Sediment	**0.0822**	**mg/Kg**		5/25/21	1
21214453 du	KRRC-SE04	Sediment	**0.0230**	**mg/Kg**		5/25/21	1
IS052421ABL blk	Blank	Solid	0.010	mg/Kg	U	5/25/21	1

Spiked Compounds:

Sample	Information	Lab Matrix	Result	Unit	Qual.	Analysis Date	Dilution
21214453 ms	KRRC-SE04	Sediment	92	%Rec		5/25/21	1
21214453 msd	KRRC-SE04	Sediment	95	%Rec		5/25/21	1
IS052421ACO std	Control	Solid	100	%Rec		5/25/21	40
IS052421AL1 lcs	Lab Control Standard	Solid	97	%Rec		5/25/21	1



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-174A
Site : KITSAP RIFLE & REVOLVER
Contact : Brandon Perkins
Account : 2021T10P000FD210ZZLA00

Sample : 21214459

Information : KRRC-SW02
Matrix : Water
Collected : 5/21/2021 1:15:00PM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.025	ug/L	U	5/27/21	1
83329	Acenaphthene	0.025	ug/L	U	5/27/21	1
208968	Acenaphthylene	0.025	ug/L	U	5/27/21	1
120127	Anthracene	0.025	ug/L	U	5/27/21	1
56553	Benzo(a)anthracene	0.025	ug/L	U	5/27/21	1
50328	Benzo(a)pyrene	0.025	ug/L	U	5/27/21	1
191242	Benzo(g,h,i)perylene	0.025	ug/L	U	5/27/21	1
205992	Benzo[b]Fluoranthene	0.025	ug/L	U	5/27/21	1
207089	Benzo[k]fluoranthene	0.025	ug/L	U	5/27/21	1
218019	Chrysene	0.025	ug/L	U	5/27/21	1
53703	Dibenzo[a,h]anthracene	0.025	ug/L	U	5/27/21	1
206440	Fluoranthene	0.025	ug/L	U	5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	0.025	ug/L	U	5/27/21	1
91203	Naphthalene	0.025	ug/L	U	5/27/21	1
91576	Naphthalene, 2-methyl-	0.025	ug/L	U	5/27/21	1
85018	Phenanthrene	0.025	ug/L	U	5/27/21	1
129000	Pyrene	0.025	ug/L	U	5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	91	%Rec		5/27/21	1
1719068	Anthracene-D10	89	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	101	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	80	%Rec		5/27/21	1
1718521	D10-Pyrene	90	%Rec		5/27/21	1

Sample : 21214461

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.050	ug/L	U	5/28/21	1
83329	Acenaphthene	0.050	ug/L	U	5/28/21	1
208968	Acenaphthylene	0.050	ug/L	U	5/28/21	1
120127	Anthracene	0.050	ug/L	U	5/28/21	1
56553	Benzo(a)anthracene	0.050	ug/L	U	5/28/21	1
50328	Benzo(a)pyrene	0.050	ug/L	U	5/28/21	1
191242	Benzo(g,h,i)perylene	0.050	ug/L	U	5/28/21	1
205992	Benzo[b]Fluoranthene	0.050	ug/L	U	5/28/21	1
207089	Benzo[k]fluoranthene	0.050	ug/L	U	5/28/21	1
218019	Chrysene	0.050	ug/L	U	5/28/21	1
53703	Dibenzo[a,h]anthracene	0.050	ug/L	U	5/28/21	1
206440	Fluoranthene	0.050	ug/L	U	5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	0.050	ug/L	U	5/28/21	1
91203	Naphthalene	0.050	ug/L	U	5/28/21	1
91576	Naphthalene, 2-methyl-	0.050	ug/L	U	5/28/21	1
85018	Phenanthrene	0.050	ug/L	U	5/28/21	1
129000	Pyrene	0.050	ug/L	U	5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	68	%Rec		5/28/21	1
1719068	Anthracene-D10	87	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	94	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	64	%Rec		5/28/21	1
1718521	D10-Pyrene	89	%Rec		5/28/21	1

Sample : 21214463

Information : KRRC-SW04
Matrix : Water
Collected : 5/21/2021 9:40:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.050	ug/L	U	5/28/21	1
83329	Acenaphthene	0.050	ug/L	U	5/28/21	1
208968	Acenaphthylene	0.050	ug/L	U	5/28/21	1
120127	Anthracene	0.050	ug/L	U	5/28/21	1
56553	Benzo(a)anthracene	0.050	ug/L	U	5/28/21	1
50328	Benzo(a)pyrene	0.050	ug/L	U	5/28/21	1
191242	Benzo(g,h,i)perylene	0.050	ug/L	U	5/28/21	1
205992	Benzo[b]Fluoranthene	0.050	ug/L	U	5/28/21	1
207089	Benzo[k]fluoranthene	0.050	ug/L	U	5/28/21	1
218019	Chrysene	0.050	ug/L	U	5/28/21	1
53703	Dibenzo[a,h]anthracene	0.050	ug/L	U	5/28/21	1
206440	Fluoranthene	0.050	ug/L	U	5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	0.050	ug/L	U	5/28/21	1
91203	Naphthalene	0.050	ug/L	U	5/28/21	1
91576	Naphthalene, 2-methyl-	0.050	ug/L	U	5/28/21	1
85018	Phenanthrene	0.050	ug/L	U	5/28/21	1
129000	Pyrene	0.050	ug/L	U	5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	66	%Rec		5/28/21	1
1719068	Anthracene-D10	64	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	70	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	64	%Rec		5/28/21	1
1718521	D10-Pyrene	85	%Rec		5/28/21	1

Sample : 21214465

Information : KRRC-SW05
Matrix : Water
Collected : 5/21/2021 8:30:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.025	ug/L	U	5/27/21	1
83329	Acenaphthene	0.025	ug/L	U	5/27/21	1
208968	Acenaphthylene	0.025	ug/L	U	5/27/21	1
120127	Anthracene	0.025	ug/L	U	5/27/21	1
56553	Benzo(a)anthracene	0.025	ug/L	U	5/27/21	1
50328	Benzo(a)pyrene	0.025	ug/L	U	5/27/21	1
191242	Benzo(g,h,i)perylene	0.025	ug/L	U	5/27/21	1
205992	Benzo[b]Fluoranthene	0.025	ug/L	U	5/27/21	1
207089	Benzo[k]fluoranthene	0.025	ug/L	U	5/27/21	1
218019	Chrysene	0.025	ug/L	U	5/27/21	1
53703	Dibenzo[a,h]anthracene	0.025	ug/L	U	5/27/21	1
206440	Fluoranthene	0.025	ug/L	U	5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	0.025	ug/L	U	5/27/21	1
91203	Naphthalene	0.025	ug/L	U	5/27/21	1
91576	Naphthalene, 2-methyl-	0.025	ug/L	U	5/27/21	1
85018	Phenanthrene	0.025	ug/L	U	5/27/21	1
129000	Pyrene	0.025	ug/L	U	5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	97	%Rec		5/27/21	1
1719068	Anthracene-D10	98	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	104	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	83	%Rec		5/27/21	1
1718521	D10-Pyrene	95	%Rec		5/27/21	1

Sample : 21214467

Information : KRRC-SW06
Matrix : Water
Collected : 5/21/2021 12:35:00PM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.025	ug/L	U	5/27/21	1
83329	Acenaphthene	0.025	ug/L	U	5/27/21	1
208968	Acenaphthylene	0.025	ug/L	U	5/27/21	1
120127	Anthracene	0.025	ug/L	U	5/27/21	1
56553	Benzo(a)anthracene	0.025	ug/L	U	5/27/21	1
50328	Benzo(a)pyrene	0.025	ug/L	U	5/27/21	1
191242	Benzo(g,h,i)perylene	0.025	ug/L	U	5/27/21	1
205992	Benzo[b]Fluoranthene	0.025	ug/L	U	5/27/21	1
207089	Benzo[k]fluoranthene	0.025	ug/L	U	5/27/21	1
218019	Chrysene	0.025	ug/L	U	5/27/21	1
53703	Dibenzo[a,h]anthracene	0.025	ug/L	U	5/27/21	1
206440	Fluoranthene	0.025	ug/L	U	5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	0.025	ug/L	U	5/27/21	1
91203	Naphthalene	0.025	ug/L	U	5/27/21	1
91576	Naphthalene, 2-methyl-	0.025	ug/L	U	5/27/21	1
85018	Phenanthrene	0.025	ug/L	U	5/27/21	1
129000	Pyrene	0.025	ug/L	U	5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	100	%Rec		5/27/21	1
1719068	Anthracene-D10	107	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	101	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	85	%Rec		5/27/21	1
1718521	D10-Pyrene	98	%Rec		5/27/21	1

Sample : 21214469

Information : KRRC-SW04
Matrix : Water
Collected : 5/21/2021 11:05:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.050	ug/L	U	5/28/21	1
83329	Acenaphthene	0.050	ug/L	U	5/28/21	1
208968	Acenaphthylene	0.050	ug/L	U	5/28/21	1
120127	Anthracene	0.050	ug/L	U	5/28/21	1
56553	Benzo(a)anthracene	0.050	ug/L	U	5/28/21	1
50328	Benzo(a)pyrene	0.050	ug/L	U	5/28/21	1
191242	Benzo(g,h,i)perylene	0.050	ug/L	U	5/28/21	1
205992	Benzo[b]Fluoranthene	0.050	ug/L	U	5/28/21	1
207089	Benzo[k]fluoranthene	0.050	ug/L	U	5/28/21	1
218019	Chrysene	0.050	ug/L	U	5/28/21	1
53703	Dibenzo[a,h]anthracene	0.050	ug/L	U	5/28/21	1
206440	Fluoranthene	0.050	ug/L	U	5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	0.050	ug/L	U	5/28/21	1
91203	Naphthalene	0.050	ug/L	U	5/28/21	1
91576	Naphthalene, 2-methyl-	0.050	ug/L	U	5/28/21	1
85018	Phenanthrene	0.050	ug/L	U	5/28/21	1
129000	Pyrene	0.050	ug/L	U	5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	96	%Rec		5/28/21	1
1719068	Anthracene-D10	73	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	81	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	90	%Rec		5/28/21	1
1718521	D10-Pyrene	92	%Rec		5/28/21	1

Sample : 21214461 Matrix Spike

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	67	%Rec		5/28/21	1
83329	Acenaphthene	67	%Rec		5/28/21	1
208968	Acenaphthylene	71	%Rec		5/28/21	1
120127	Anthracene	91	%Rec		5/28/21	1
56553	Benzo(a)anthracene	111	%Rec		5/28/21	1
50328	Benzo(a)pyrene	93	%Rec		5/28/21	1
191242	Benzo(g,h,i)perylene	88	%Rec		5/28/21	1
205992	Benzo[b]Fluoranthene	98	%Rec		5/28/21	1
207089	Benzo[k]fluoranthene	90	%Rec		5/28/21	1
218019	Chrysene	91	%Rec		5/28/21	1
53703	Dibenzo[a,h]anthracene	96	%Rec		5/28/21	1
206440	Fluoranthene	101	%Rec		5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	94	%Rec		5/28/21	1
91203	Naphthalene	89	%Rec		5/28/21	1
91576	Naphthalene, 2-methyl-	92	%Rec		5/28/21	1
85018	Phenanthrene	89	%Rec		5/28/21	1
129000	Pyrene	90	%Rec		5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	74	%Rec		5/28/21	1
1719068	Anthracene-D10	94	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	100	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	68	%Rec		5/28/21	1
1718521	D10-Pyrene	95	%Rec		5/28/21	1

Sample : 21214461 Matrix Spike#2

Information : KRRC-SW03
Matrix : Water
Collected : 5/21/2021 10:05:00AM

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	66	%Rec		5/28/21	1
83329	Acenaphthene	66	%Rec		5/28/21	1
208968	Acenaphthylene	70	%Rec		5/28/21	1
120127	Anthracene	90	%Rec		5/28/21	1
56553	Benzo(a)anthracene	109	%Rec		5/28/21	1
50328	Benzo(a)pyrene	92	%Rec		5/28/21	1
191242	Benzo(g,h,i)perylene	86	%Rec		5/28/21	1
205992	Benzo[b]Fluoranthene	91	%Rec		5/28/21	1
207089	Benzo[k]fluoranthene	96	%Rec		5/28/21	1
218019	Chrysene	90	%Rec		5/28/21	1
53703	Dibenzo[a,h]anthracene	95	%Rec		5/28/21	1
206440	Fluoranthene	102	%Rec		5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	93	%Rec		5/28/21	1
91203	Naphthalene	90	%Rec		5/28/21	1
91576	Naphthalene, 2-methyl-	92	%Rec		5/28/21	1
85018	Phenanthrene	90	%Rec		5/28/21	1
129000	Pyrene	89	%Rec		5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	74	%Rec		5/28/21	1
1719068	Anthracene-D10	93	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	99	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	68	%Rec		5/28/21	1
1718521	D10-Pyrene	94	%Rec		5/28/21	1

Sample : 105W052621B1 Blank

Information : Blank
Matrix : Liquid

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.025	ug/L	U	5/27/21	1
83329	Acenaphthene	0.025	ug/L	U	5/27/21	1
208968	Acenaphthylene	0.025	ug/L	U	5/27/21	1
120127	Anthracene	0.025	ug/L	U	5/27/21	1
56553	Benzo(a)anthracene	0.025	ug/L	U	5/27/21	1
50328	Benzo(a)pyrene	0.025	ug/L	U	5/27/21	1
191242	Benzo(g,h,i)perylene	0.025	ug/L	U	5/27/21	1
205992	Benzo[b]Fluoranthene	0.025	ug/L	U	5/27/21	1
207089	Benzo[k]fluoranthene	0.025	ug/L	U	5/27/21	1
218019	Chrysene	0.025	ug/L	U	5/27/21	1
53703	Dibenzo[a,h]anthracene	0.025	ug/L	U	5/27/21	1
206440	Fluoranthene	0.025	ug/L	U	5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	0.025	ug/L	U	5/27/21	1
91203	Naphthalene	0.025	ug/L	U	5/27/21	1
91576	Naphthalene, 2-methyl-	0.025	ug/L	U	5/27/21	1
85018	Phenanthrene	0.025	ug/L	U	5/27/21	1
129000	Pyrene	0.025	ug/L	U	5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	87	%Rec		5/27/21	1
1719068	Anthracene-D10	93	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	103	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	82	%Rec		5/27/21	1
1718521	D10-Pyrene	98	%Rec		5/27/21	1

Sample : 105W052821B1 Blank

Information : Blank
Matrix : Liquid

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	0.025	ug/L	U	5/28/21	1
83329	Acenaphthene	0.025	ug/L	U	5/28/21	1
208968	Acenaphthylene	0.025	ug/L	U	5/28/21	1
120127	Anthracene	0.025	ug/L	U	5/28/21	1
56553	Benzo(a)anthracene	0.025	ug/L	U	5/28/21	1
50328	Benzo(a)pyrene	0.025	ug/L	U	5/28/21	1
191242	Benzo(g,h,i)perylene	0.025	ug/L	U	5/28/21	1
205992	Benzo[b]Fluoranthene	0.025	ug/L	U	5/28/21	1
207089	Benzo[k]fluoranthene	0.025	ug/L	U	5/28/21	1
218019	Chrysene	0.025	ug/L	U	5/28/21	1
53703	Dibenzo[a,h]anthracene	0.025	ug/L	U	5/28/21	1
206440	Fluoranthene	0.025	ug/L	U	5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	0.025	ug/L	U	5/28/21	1
91203	Naphthalene	0.025	ug/L	U	5/28/21	1
91576	Naphthalene, 2-methyl-	0.025	ug/L	U	5/28/21	1
85018	Phenanthrene	0.025	ug/L	U	5/28/21	1
129000	Pyrene	0.025	ug/L	U	5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	77	%Rec		5/28/21	1
1719068	Anthracene-D10	88	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	92	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	79	%Rec		5/28/21	1
1718521	D10-Pyrene	97	%Rec		5/28/21	1

Sample : 105W052621L1 Lab Control Std

Information : Lab Control Standard

Matrix : Liquid

Parameter : PAH

Prep Method: 3535A - Solid Phase Extraction

Analysis Method: 8270E - Semivolatiles by GC/MS

Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	78	%Rec		5/27/21	1
83329	Acenaphthene	77	%Rec		5/27/21	1
208968	Acenaphthylene	84	%Rec		5/27/21	1
120127	Anthracene	89	%Rec		5/27/21	1
56553	Benzo(a)anthracene	136	%Rec		5/27/21	1
50328	Benzo(a)pyrene	96	%Rec		5/27/21	1
191242	Benzo(g,h,i)perylene	97	%Rec		5/27/21	1
205992	Benzo[b]Fluoranthene	106	%Rec		5/27/21	1
207089	Benzo[k]fluoranthene	106	%Rec		5/27/21	1
218019	Chrysene	93	%Rec		5/27/21	1
53703	Dibenzo[a,h]anthracene	106	%Rec		5/27/21	1
206440	Fluoranthene	116	%Rec		5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	110	%Rec		5/27/21	1
91203	Naphthalene	84	%Rec		5/27/21	1
91576	Naphthalene, 2-methyl-	92	%Rec		5/27/21	1
85018	Phenanthrene	87	%Rec		5/27/21	1
129000	Pyrene	94	%Rec		5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	90	%Rec		5/27/21	1
1719068	Anthracene-D10	99	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	118	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	80	%Rec		5/27/21	1
1718521	D10-Pyrene	99	%Rec		5/27/21	1

Sample : 105W052821L1 Lab Control Std

Information : Lab Control Standard
Matrix : Liquid

Parameter : PAH
Prep Method: 3535A - Solid Phase Extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	75	%Rec		5/28/21	1
83329	Acenaphthene	76	%Rec		5/28/21	1
208968	Acenaphthylene	76	%Rec		5/28/21	1
120127	Anthracene	90	%Rec		5/28/21	1
56553	Benzo(a)anthracene	114	%Rec		5/28/21	1
50328	Benzo(a)pyrene	97	%Rec		5/28/21	1
191242	Benzo(g,h,i)perylene	94	%Rec		5/28/21	1
205992	Benzo[b]Fluoranthene	99	%Rec		5/28/21	1
207089	Benzo[k]fluoranthene	104	%Rec		5/28/21	1
218019	Chrysene	96	%Rec		5/28/21	1
53703	Dibenzo[a,h]anthracene	99	%Rec		5/28/21	1
206440	Fluoranthene	106	%Rec		5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	100	%Rec		5/28/21	1
91203	Naphthalene	85	%Rec		5/28/21	1
91576	Naphthalene, 2-methyl-	88	%Rec		5/28/21	1
85018	Phenanthrene	90	%Rec		5/28/21	1
129000	Pyrene	94	%Rec		5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	79	%Rec		5/28/21	1
1719068	Anthracene-D10	93	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	104	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	77	%Rec		5/28/21	1
1718521	D10-Pyrene	99	%Rec		5/28/21	1

Sample : 105W052621L2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Liquid

Parameter : PAH

Prep Method: 3535A - Solid Phase Extraction

Analysis Method: 8270E - Semivolatiles by GC/MS

Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	87	%Rec		5/27/21	1
83329	Acenaphthene	86	%Rec		5/27/21	1
208968	Acenaphthylene	95	%Rec		5/27/21	1
120127	Anthracene	96	%Rec		5/27/21	1
56553	Benzo(a)anthracene	138	%Rec		5/27/21	1
50328	Benzo(a)pyrene	96	%Rec		5/27/21	1
191242	Benzo(g,h,i)perylene	96	%Rec		5/27/21	1
205992	Benzo[b]Fluoranthene	111	%Rec		5/27/21	1
207089	Benzo[k]fluoranthene	100	%Rec		5/27/21	1
218019	Chrysene	92	%Rec		5/27/21	1
53703	Dibenzo[a,h]anthracene	105	%Rec		5/27/21	1
206440	Fluoranthene	121	%Rec		5/27/21	1
193395	Indeno(1,2,3-cd)pyrene	109	%Rec		5/27/21	1
91203	Naphthalene	94	%Rec		5/27/21	1
91576	Naphthalene, 2-methyl-	102	%Rec		5/27/21	1
85018	Phenanthrene	95	%Rec		5/27/21	1
129000	Pyrene	97	%Rec		5/27/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	102	%Rec		5/27/21	1
1719068	Anthracene-D10	107	%Rec		5/27/21	1
63466717	Benzo[a]pyrene-D12	118	%Rec		5/27/21	1
81103799	D10-Fluorene (SS)	89	%Rec		5/27/21	1
1718521	D10-Pyrene	103	%Rec		5/27/21	1

Sample : 105W052821L2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Liquid

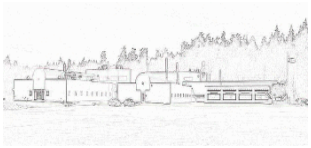
Parameter : PAH

Prep Method: 3535A - Solid Phase Extraction

Analysis Method: 8270E - Semivolatiles by GC/MS

Weight Basis : Unspecified

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	84	%Rec		5/28/21	1
83329	Acenaphthene	85	%Rec		5/28/21	1
208968	Acenaphthylene	87	%Rec		5/28/21	1
120127	Anthracene	98	%Rec		5/28/21	1
56553	Benzo(a)anthracene	115	%Rec		5/28/21	1
50328	Benzo(a)pyrene	97	%Rec		5/28/21	1
191242	Benzo(g,h,i)perylene	94	%Rec		5/28/21	1
205992	Benzo[b]Fluoranthene	99	%Rec		5/28/21	1
207089	Benzo[k]fluoranthene	103	%Rec		5/28/21	1
218019	Chrysene	96	%Rec		5/28/21	1
53703	Dibenzo[a,h]anthracene	99	%Rec		5/28/21	1
206440	Fluoranthene	109	%Rec		5/28/21	1
193395	Indeno(1,2,3-cd)pyrene	100	%Rec		5/28/21	1
91203	Naphthalene	95	%Rec		5/28/21	1
91576	Naphthalene, 2-methyl-	97	%Rec		5/28/21	1
85018	Phenanthrene	97	%Rec		5/28/21	1
129000	Pyrene	98	%Rec		5/28/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	90	%Rec		5/28/21	1
1719068	Anthracene-D10	101	%Rec		5/28/21	1
63466717	Benzo[a]pyrene-D12	104	%Rec		5/28/21	1
81103799	D10-Fluorene (SS)	86	%Rec		5/28/21	1
1718521	D10-Pyrene	103	%Rec		5/28/21	1



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-174A
Site : KITSAP RIFLE & REVOLVER
Contact : Brandon Perkins
Account : 2021T10P000FD210ZZLA00

Sample : 21214450

Information : KRRC-SE01
Matrix : Sediment
Collected : 5/21/2021 2:30:00PM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	33	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	33	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	33	ug/kg	U	6/ 3/21	1
120127	Anthracene	33	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	33	ug/kg	U	6/ 3/21	1
50328	**Benzo(a)pyrene**	**52**	**ug/kg**		6/ 3/21	1
191242	**Benzo(g,h,i)perylene**	**40**	**ug/kg**		6/ 3/21	1
205992	Benzo[b]Fluoranthene	33	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	33	ug/kg	U	6/ 3/21	1
218019	Chrysene	33	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	33	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	33	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	33	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	33	ug/kg	U	6/ 3/21	1
91203	Naphthalene	33	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	33	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	33	ug/kg	U	6/ 3/21	1
129000	Pyrene	33	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	105	%Rec		6/ 3/21	1
1719068	Anthracene-D10	95	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	102	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	95	%Rec		6/ 3/21	1
1718521	D10-Pyrene	103	%Rec		6/ 3/21	1

Sample : 21214451

Information : KRRC-SE02
Matrix : Sediment
Collected : 5/21/2021 1:15:00PM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	49	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	49	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	49	ug/kg	U	6/ 3/21	1
120127	Anthracene	49	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	49	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	49	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	49	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	49	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	49	ug/kg	U	6/ 3/21	1
218019	Chrysene	49	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	49	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	49	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	49	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	49	ug/kg	U	6/ 3/21	1
91203	Naphthalene	49	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	49	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	49	ug/kg	U	6/ 3/21	1
129000	Pyrene	49	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	99	%Rec		6/ 3/21	1
1719068	Anthracene-D10	93	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	97	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	91	%Rec		6/ 3/21	1
1718521	D10-Pyrene	98	%Rec		6/ 3/21	1

Sample : 21214452

Information : KRRC-SE03
Matrix : Sediment
Collected : 5/21/2021 10:05:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	50	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	50	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	50	ug/kg	U	6/ 3/21	1
120127	Anthracene	50	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	50	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	50	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	50	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	50	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	50	ug/kg	U	6/ 3/21	1
218019	Chrysene	50	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	50	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	50	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	50	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	50	ug/kg	U	6/ 3/21	1
91203	Naphthalene	50	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	50	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	50	ug/kg	U	6/ 3/21	1
129000	Pyrene	50	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	103	%Rec		6/ 3/21	1
1719068	Anthracene-D10	95	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	100	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	93	%Rec		6/ 3/21	1
1718521	D10-Pyrene	104	%Rec		6/ 3/21	1

Sample : 21214453

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	34	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	34	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	34	ug/kg	U	6/ 3/21	1
120127	Anthracene	34	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	34	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	34	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	34	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	34	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	34	ug/kg	U	6/ 3/21	1
218019	Chrysene	34	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	34	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	34	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	34	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	34	ug/kg	U	6/ 3/21	1
91203	Naphthalene	34	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	34	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	34	ug/kg	U	6/ 3/21	1
129000	Pyrene	34	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	102	%Rec		6/ 3/21	1
1719068	Anthracene-D10	95	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	100	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	94	%Rec		6/ 3/21	1
1718521	D10-Pyrene	105	%Rec		6/ 3/21	1

Sample : 21214454

Information : KRRC-SE05
Matrix : Sediment
Collected : 5/21/2021 8:30:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	49	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	49	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	49	ug/kg	U	6/ 3/21	1
120127	Anthracene	49	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	49	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	49	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	49	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	49	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	49	ug/kg	U	6/ 3/21	1
218019	Chrysene	49	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	49	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	49	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	49	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	49	ug/kg	U	6/ 3/21	1
91203	Naphthalene	49	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	49	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	49	ug/kg	U	6/ 3/21	1
129000	Pyrene	49	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	103	%Rec		6/ 3/21	1
1719068	Anthracene-D10	94	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	100	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	92	%Rec		6/ 3/21	1
1718521	D10-Pyrene	100	%Rec		6/ 3/21	1

Sample : 21214455

Information : KRRC-SE06
Matrix : Sediment
Collected : 5/21/2021 12:35:00PM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	49	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	49	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	49	ug/kg	U	6/ 3/21	1
120127	Anthracene	49	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	49	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	49	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	49	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	49	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	49	ug/kg	U	6/ 3/21	1
218019	Chrysene	49	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	49	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	49	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	49	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	49	ug/kg	U	6/ 3/21	1
91203	Naphthalene	49	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	49	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	49	ug/kg	U	6/ 3/21	1
129000	Pyrene	49	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	106	%Rec		6/ 3/21	1
1719068	Anthracene-D10	97	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	104	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	96	%Rec		6/ 3/21	1
1718521	D10-Pyrene	102	%Rec		6/ 3/21	1

Sample : 21214456

Information : KRRC-SE03
Matrix : Sediment
Collected : 5/21/2021 11:30:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	50	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	50	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	50	ug/kg	U	6/ 3/21	1
120127	Anthracene	50	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	50	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	50	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	50	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	50	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	50	ug/kg	U	6/ 3/21	1
218019	Chrysene	50	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	50	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	50	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	50	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	50	ug/kg	U	6/ 3/21	1
91203	Naphthalene	50	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	50	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	50	ug/kg	U	6/ 3/21	1
129000	Pyrene	50	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	104	%Rec		6/ 3/21	1
1719068	Anthracene-D10	96	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	102	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	93	%Rec		6/ 3/21	1
1718521	D10-Pyrene	105	%Rec		6/ 3/21	1

Sample : 21214453 Matrix Spike

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	96	%Rec		6/ 3/21	1
83329	Acenaphthene	95	%Rec		6/ 3/21	1
208968	Acenaphthylene	104	%Rec		6/ 3/21	1
120127	Anthracene	102	%Rec		6/ 3/21	1
56553	Benzo(a)anthracene	105	%Rec		6/ 3/21	1
50328	Benzo(a)pyrene	104	%Rec		6/ 3/21	1
191242	Benzo(g,h,i)perylene	112	%Rec		6/ 3/21	1
205992	Benzo[b]Fluoranthene	110	%Rec		6/ 3/21	1
207089	Benzo[k]fluoranthene	104	%Rec		6/ 3/21	1
218019	Chrysene	98	%Rec		6/ 3/21	1
53703	Dibenzo[a,h]anthracene	106	%Rec		6/ 3/21	1
132649	Dibenzofuran	96	%Rec		6/ 3/21	1
206440	Fluoranthene	105	%Rec		6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	106	%Rec		6/ 3/21	1
91203	Naphthalene	93	%Rec		6/ 3/21	1
91576	Naphthalene, 2-methyl-	96	%Rec		6/ 3/21	1
85018	Phenanthrene	95	%Rec		6/ 3/21	1
129000	Pyrene	105	%Rec		6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	108	%Rec		6/ 3/21	1
1719068	Anthracene-D10	97	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	105	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	97	%Rec		6/ 3/21	1
1718521	D10-Pyrene	107	%Rec		6/ 3/21	1

Sample : 21214453 Matrix Spike#2

Information : KRRC-SE04
Matrix : Sediment
Collected : 5/21/2021 9:40:00AM

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	97	%Rec		6/ 3/21	1
83329	Acenaphthene	94	%Rec		6/ 3/21	1
208968	Acenaphthylene	103	%Rec		6/ 3/21	1
120127	Anthracene	101	%Rec		6/ 3/21	1
56553	Benzo(a)anthracene	103	%Rec		6/ 3/21	1
50328	Benzo(a)pyrene	100	%Rec		6/ 3/21	1
191242	Benzo(g,h,i)perylene	108	%Rec		6/ 3/21	1
205992	Benzo[b]Fluoranthene	114	%Rec		6/ 3/21	1
207089	Benzo[k]fluoranthene	92	%Rec		6/ 3/21	1
218019	Chrysene	95	%Rec		6/ 3/21	1
53703	Dibenzo[a,h]anthracene	103	%Rec		6/ 3/21	1
132649	Dibenzofuran	96	%Rec		6/ 3/21	1
206440	Fluoranthene	102	%Rec		6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	103	%Rec		6/ 3/21	1
91203	Naphthalene	91	%Rec		6/ 3/21	1
91576	Naphthalene, 2-methyl-	94	%Rec		6/ 3/21	1
85018	Phenanthrene	95	%Rec		6/ 3/21	1
129000	Pyrene	101	%Rec		6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	105	%Rec		6/ 3/21	1
1719068	Anthracene-D10	96	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	102	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	98	%Rec		6/ 3/21	1
1718521	D10-Pyrene	104	%Rec		6/ 3/21	1

Sample : 105S060221B1 Blank

Information : Blank
Matrix : Solid

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
86737	9H-Fluorene	25	ug/kg	U	6/ 3/21	1
83329	Acenaphthene	25	ug/kg	U	6/ 3/21	1
208968	Acenaphthylene	25	ug/kg	U	6/ 3/21	1
120127	Anthracene	25	ug/kg	U	6/ 3/21	1
56553	Benzo(a)anthracene	25	ug/kg	U	6/ 3/21	1
50328	Benzo(a)pyrene	25	ug/kg	U	6/ 3/21	1
191242	Benzo(g,h,i)perylene	25	ug/kg	U	6/ 3/21	1
205992	Benzo[b]Fluoranthene	25	ug/kg	U	6/ 3/21	1
207089	Benzo[k]fluoranthene	25	ug/kg	U	6/ 3/21	1
218019	Chrysene	25	ug/kg	U	6/ 3/21	1
53703	Dibenzo[a,h]anthracene	25	ug/kg	U	6/ 3/21	1
132649	Dibenzofuran	25	ug/kg	U	6/ 3/21	1
206440	Fluoranthene	25	ug/kg	U	6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	25	ug/kg	U	6/ 3/21	1
91203	Naphthalene	25	ug/kg	U	6/ 3/21	1
91576	Naphthalene, 2-methyl-	25	ug/kg	U	6/ 3/21	1
85018	Phenanthrene	25	ug/kg	U	6/ 3/21	1
129000	Pyrene	25	ug/kg	U	6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	103	%Rec		6/ 3/21	1
1719068	Anthracene-D10	93	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	95	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	96	%Rec		6/ 3/21	1
1718521	D10-Pyrene	108	%Rec		6/ 3/21	1

Sample : 105S060221L1 Lab Control Std

Information : Lab Control Standard
Matrix : Solid

Parameter : PAH
Prep Method: 3541 - Automated soxhlet extraction
Analysis Method: 8270E - Semivolatiles by GC/MS
Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	96	%Rec		6/ 3/21	1
83329	Acenaphthene	94	%Rec		6/ 3/21	1
208968	Acenaphthylene	99	%Rec		6/ 3/21	1
120127	Anthracene	100	%Rec		6/ 3/21	1
56553	Benzo(a)anthracene	101	%Rec		6/ 3/21	1
50328	Benzo(a)pyrene	99	%Rec		6/ 3/21	1
191242	Benzo(g,h,i)perylene	105	%Rec		6/ 3/21	1
205992	Benzo[b]Fluoranthene	99	%Rec		6/ 3/21	1
207089	Benzo[k]fluoranthene	104	%Rec		6/ 3/21	1
218019	Chrysene	94	%Rec		6/ 3/21	1
53703	Dibenzo[a,h]anthracene	97	%Rec		6/ 3/21	1
132649	Dibenzofuran	95	%Rec		6/ 3/21	1
206440	Fluoranthene	106	%Rec		6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	98	%Rec		6/ 3/21	1
91203	Naphthalene	92	%Rec		6/ 3/21	1
91576	Naphthalene, 2-methyl-	94	%Rec		6/ 3/21	1
85018	Phenanthrene	93	%Rec		6/ 3/21	1
129000	Pyrene	100	%Rec		6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	102	%Rec		6/ 3/21	1
1719068	Anthracene-D10	94	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	99	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	97	%Rec		6/ 3/21	1
1718521	D10-Pyrene	99	%Rec		6/ 3/21	1

Sample : 105S060221L2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Solid

Parameter : PAH

Prep Method: 3541 - Automated soxhlet extraction

Analysis Method: 8270E - Semivolatiles by GC/MS

Weight Basis : Dry

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
86737	9H-Fluorene	97	%Rec		6/ 3/21	1
83329	Acenaphthene	92	%Rec		6/ 3/21	1
208968	Acenaphthylene	102	%Rec		6/ 3/21	1
120127	Anthracene	98	%Rec		6/ 3/21	1
56553	Benzo(a)anthracene	101	%Rec		6/ 3/21	1
50328	Benzo(a)pyrene	98	%Rec		6/ 3/21	1
191242	Benzo(g,h,i)perylene	105	%Rec		6/ 3/21	1
205992	Benzo[b]Fluoranthene	99	%Rec		6/ 3/21	1
207089	Benzo[k]fluoranthene	96	%Rec		6/ 3/21	1
218019	Chrysene	92	%Rec		6/ 3/21	1
53703	Dibenzo[a,h]anthracene	96	%Rec		6/ 3/21	1
132649	Dibenzofuran	94	%Rec		6/ 3/21	1
206440	Fluoranthene	101	%Rec		6/ 3/21	1
193395	Indeno(1,2,3-cd)pyrene	96	%Rec		6/ 3/21	1
91203	Naphthalene	91	%Rec		6/ 3/21	1
91576	Naphthalene, 2-methyl-	94	%Rec		6/ 3/21	1
85018	Phenanthrene	92	%Rec		6/ 3/21	1
129000	Pyrene	98	%Rec		6/ 3/21	1
Surrogate Compounds:						
93951974	Acenaphthylene-D8	106	%Rec		6/ 3/21	1
1719068	Anthracene-D10	95	%Rec		6/ 3/21	1
63466717	Benzo[a]pyrene-D12	99	%Rec		6/ 3/21	1
81103799	D10-Fluorene (SS)	99	%Rec		6/ 3/21	1
1718521	D10-Pyrene	100	%Rec		6/ 3/21	1

ATTACHMENT D
DATA VALIDATION REPORT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Drive East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR INORGANIC CHEMICAL ANALYSES

July 14, 2021

From: Theresa McBride & Katie Adams
Laboratory Services & Applied Sciences Division, US EPA Region 10 Laboratory

To: Brandon Perkins
RE: Kitsap Rifle & Revolver
Project Code: SFP-174A
Account Code: 2021T10P000FD210ZZLA00

Metals in Sediments
21214450 21214451 21214452 21214453 21214454 21214455
21214456

Total Metals in Water
21214459 21214461 21214463 21214465 21214467 21214469

Dissolved Metals in Waters (Filtered)
21214460 21214462 21214464 21214466 21214468 21214470

The following describes the quality assurance review of the data for the analysis parameters and samples listed above. The analyses were performed by the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

1. Data Qualifications

The US EPA Region 10 Laboratory has been accredited by A2LA and has Certificate Number 5027.01. For those tests for which the Laboratory has been accredited by A2LA, results in this report comply with ISO IEC 17025:2017 and the 2009 TNI Environmental Testing Laboratory Standard.

Field information was provided to the laboratory from other sources, such as Chain of Custody records.

The data and associated documents were reviewed against the quality control criteria outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). The following areas were reviewed against these quality control measures:

Sample Transport and Receipt
Sample Holding Times
Sample Preparation
Initial Calibration/Continuing Calibration Verification
Laboratory Control Samples
Blank Analysis
Duplicate Analysis
Matrix Spike/Matrix Spike Duplicate (MS/MSD)
Internal Standard Performance

Reference Materials
Instrument Peak Integrations
Interferences

2. QC Elements Not Meeting Laboratory/QAPP Criteria

Matrix Spike/Matrix Spike Duplicate (MS/MSD)
In sediments, MS/MSD recoveries were low (44% and 43%) for antimony and high (129% and 143%) for calcium; and the MSD was high (138%) for manganese. All antimony, calcium and manganese results for sediments are qualified "J", estimated, on this basis.

In water samples, the MSD was high (128%) for aluminum. All detected total aluminum results for waters are qualified "J", estimated, on this basis.

3. Changes from Preliminary Data

The Aluminum result for sample 21214465 was qualified "UJ" in preliminary data but will be qualified only "U" in the final data (the high MSD indicates possible high bias, which is not indicated in non-detected results). No other changes were made to the results between the preliminary and final data.

4. Data Qualifiers

Data for all samples and analytes were assessed for compliance with each of the requirements described in Section 1. Data qualifiers were assigned, as necessary, to alert the user to instances where data did not meet all requirements. In cases where more than one QC failure occurred, the most restrictive data qualifier has been applied to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier considering the project's data quality objectives. Should questions arise regarding the data, contact Katie Adams at the Region 10 Laboratory, phone number (360) 871-8748.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; however, the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte cannot be determined from the data due to severe quality control problems. The data are rejected and considered unusable. No value is reported with this qualification.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. No value is reported with this qualification. ‡

‡ NA is most often applied to spike results where the recovery cannot be determined accurately due to the high native sample concentration.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Drive East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR INORGANIC CHEMICAL ANALYSES

July 7, 2021

From: Stephanie Le
Laboratory Services & Applied Sciences Division, US EPA Region 10 Laboratory

To: Brandon Perkins
RE: Kitsap Rifle & Revolver
Project Code: SFP-174A
Account Code: 2021T10P000FD210ZZLA00

Mercury in Sediments
21214450 21214451 21214452 21214453 21214454 21214455
21214456

Mercury in Total Waters
21214459 21214461 21214463 21214465 21214467 21214469

Mercury in Dissolved (Filtered) Waters
21214460 21214462 21214464 21214466 21214468 21214470

The following describes the quality assurance review of the data for the analysis parameters and samples listed above. The analyses were performed by the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

1. Data Qualifications

The US EPA Region 10 Laboratory has been accredited by A2LA and has Certificate Number 5027.01. For those tests for which the Laboratory has been accredited by A2LA, results in this report comply with ISO IEC 17025:2017 and the 2009 TNI Environmental Testing Laboratory Standard.

Field information was provided to the laboratory from other sources, such as Chain of Custody records.

The data and associated documents were reviewed against the quality control criteria outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). The following areas were reviewed against these quality control measures:

Sample Transport and Receipt
Sample Holding Times
Sample Preparation
Initial Calibration/Continuing Calibration Verification
Laboratory Control Samples
Blank Analysis
Duplicate Analysis
Matrix Spike/Matrix Spike Duplicate (MS/MSD)
Reference Materials

2. QC Elements Not Meeting Laboratory/QAPP Criteria

None.

3. Changes from Preliminary Data

Mercury in sediments results were reported in preliminary results on a wet weight basis. For final results, these results have been corrected to be reported on a dry weight basis, per our standard laboratory practice.

4. Data Qualifiers

Data for all samples and analytes were assessed for compliance with each of the requirements described in Section 1. Data qualifiers were assigned, as necessary, to alert the user to instances where data did not meet all requirements. In cases where more than one QC failure occurred, the most restrictive data qualifier has been applied to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier considering the project's data quality objectives. Should questions arise regarding the data, contact Katie Adams at the Region 10 Laboratory, phone number (360) 871-8748.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; however, the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte cannot be determined from the data due to severe quality control problems. The data are rejected and considered unusable. No value is reported with this qualification.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. No value is reported with this qualification. ‡

‡ NA is most often applied to spike results where the recovery cannot be determined accurately due to the high native sample concentration.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Drive East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR ORGANIC CHEMICAL ANALYSES

June 22, 2021

From: Dana Walker
Laboratory Services & Applied Sciences Division, US EPA Region 10 Laboratory

To: Brandon Perkins
RE: KITSAP RIFLE & REVOLVER
Project Code: SFP-174A
Account Code: 2021T10P000FD210ZZLA00

PAH waters

21214459	21214461	21214463	21214465	21214467	21214469

The following describes the quality assurance review of the data for the analysis parameters and sample listed above. The analyses were performed by the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

1. Data Qualifications

The US EPA Region 10 Laboratory has been accredited by A2LA and has Certificate Number 5027.01. For those tests for which the Laboratory has been accredited by A2LA, results in this report comply with ISO IEC 17025:2017 and the 2009 TNI Environmental Testing Laboratory Standard.

Field information was provided to the laboratory from other sources, such as Chain of Custody records.

The data and associated documents were reviewed against the quality control criteria outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). The following areas were reviewed against these quality control measures:

Sample Transport and Receipt
Holding Times
Sample Preparation
Initial Calibration/Continuing Calibration Verification
Laboratory Control Samples
Blank Analysis
Surrogate Spikes
Internal Standard Performance
Compound Quantitation Analyte
Identification

2. Areas Not Meeting Laboratory/QAPP Criteria
None.

3. Data Qualifiers

Data for all samples and analytes were assessed for compliance with each of the requirements described in Section 1. Data qualifiers were assigned, as necessary, to alert the user to instances where data did not meet all requirements. In cases where more than one QC failure occurred, the most restrictive data qualifier has been applied to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier considering the project's data quality objectives. Should questions arise regarding the data, contact Dana Walker at the Region 10 Laboratory, phone number (360) 871-8704.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; however, the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte cannot be determined from the data due to severe quality control problems. The data are rejected and considered unusable. No value is reported with this qualification.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. No value is reported with this qualification.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Drive East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR ORGANIC CHEMICAL ANALYSES

June 16, 2021

From: Dana Walker
Laboratory Services & Applied Sciences Division, US EPA Region 10 Laboratory

To: Brandon Perkins
RE: KITSAP RIFLE & REVOLVER
Project Code: SFP-174A
Account Code: 2021T10P000DD210ZZLA00

PAH sediments

21214450, 21214451, 21214452, 21214453, 21214454, 21214455, 21214456

The following describes the quality assurance review of the data for the analysis parameters and sample listed above. The analyses were performed by the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

1. Data Qualifications

The US EPA Region 10 Laboratory has been accredited by A2LA and has Certificate Number 5027.01. For those tests for which the Laboratory has been accredited by A2LA, results in this report comply with ISO IEC 17025:2017 and the 2009 TNI Environmental Testing Laboratory Standard.

Field information was provided to the laboratory from other sources, such as Chain of Custody records.

The data and associated documents were reviewed against the quality control criteria outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). The following areas were reviewed against these quality control measures:

Sample Transport and Receipt
Holding Times
Sample Preparation
Initial Calibration/Continuing Calibration Verification
Laboratory Control Samples
Blank Analysis
Surrogate Spikes
Internal Standard Performance
Compound Quantitation Analyte
Identification

2. Areas Not Meeting Laboratory/QAPP Criteria
None.

3. Data Qualifiers

Data for all samples and analytes were assessed for compliance with each of the requirements described in Section 1. Data qualifiers were assigned, as necessary, to alert the user to instances where data did not meet all requirements. In cases where more than one QC failure occurred, the most restrictive data qualifier has been applied to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier considering the project's data quality objectives. Should questions arise regarding the data, contact Dana Walker at the Region 10 Laboratory, phone number (360) 871-8704.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; however, the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte cannot be determined from the data due to severe quality control problems. The data are rejected and considered unusable. No value is reported with this qualification.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. No value is reported with this qualification.

ATTACHMENT E
FIELD LOGBOOK NOTES

DEFYING
MOTHER NATURE®
SINCE 1916

RECYCLABLE

All components of this product are recyclable

Rite in the Rain

A patented, environmentally responsible, all-weather writing paper that sheds water and enables you to write anywhere, in any weather.

Using a pencil or all-weather pen, *Rite in the Rain* ensures that your notes survive the rigors of the field, regardless of the conditions.

JL DARLING LLC
Tacoma, WA 98424-1017 USA
www.RiteintheRain.com

Item No. 351FX
ISBN: 978-1-60134-186-6

Made in the USA
US Pat No. 6,863,940

9 19
6 32281 03519 0

Kitsap Rifle & Revolver Club

Rite in the Rain®
ALL-WEATHER
FIELD
№ 351FX

SFP-179
TO 68HE0720F0160-08
05/21/21 -

Sampling

Logbook 1 of ___

INCH

MADE IN TACOMA
SINCE 1916
Rite in the Rain®
DEFYING MOTHER NATURE

Name Weston Solutions, Inc.

Address 1011 SW Klickitat Way #212
Seattle, WA 98134

Phone 713-985-6654

Project Kitsap Rifle & Revolver Club
WON 20510.012.003.0036.00

MADE USA · RITE GREEN · Archival paper

RiteintheRain.com

CONTENTS

PAGE	REFERENCE	DATE

05/21/24 Kitsap Rifle & Revolver Club.

0715 START S. Nguyen & T. Vroman arrive on-site. Parked at ~~Hall~~ Newberry Heritage Park. Current conditions are 48°F, overcast, light shower; Sup winds from SE, 84% humidity.

0725 Safety meeting conducted at tail gate. Slips, trips, & falls & Hi-vis on the road.

0850 Collected sample KRRC-05. Field sample, Sed. sample lots of organics.

0940 Collected sample KRRC-04. Field sample. MS/MSD on Sed. Samples. Sediments contain less segments than KRRC-05. Bio-film observed on surface of stream bed. Picture 002 @ 0933.

LATE ADD Picture 001 @ 0811. Taken facing SE. Picture 002 taken facing NE

1005 Sample KRRC-03 collected. Field sample. MS/MSD on surface water sample. ~~1050~~ Silty sediment collected at apron mouth. Picture 003 @ 0953 facing South

1105 Field duplicate of surface water collected @ KRRC-04.

Kitsap Rifle & Revolver Club 05/21/24

1130 Collected field duplicate of Sample KRRC-03. Sediments only.

1235 Collected field sample. KRRC-06. Sediment sample has higher % of organics. Picture 004 @ 1235 Facing ~~NE~~ NW. 30ft from the property line.

1315 Collected field sample KRRC-07 Sample location has ~~less~~ higher density of organics in top layer. Picture 005 @ 1304. facing SW.

1430 KRRC-01 is dry. Collected sediment field sample KRRC-01. Picture 006 @ 1541. facing South.

1655 Samples dropped at MEL in Port Orchard, WA

1701 START departs for Seattle ERLC.

05/21/24