Technical Report No. 26-05

Baseline Aquatic Studies for the Johnson Tract Project - 2025

by

Josh M. Brekken

April 2026

Alaska Department of Fish and Game **Habitat Section**

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in reports by the Divisions of Habitat, Sport Fish, and Commercial Fisheries. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figures or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not detected	N
no data	ND
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

TECHNICAL REPORT NO. 26-05

BASELINE AQUATIC STUDIES FOR THE JOHNSON TRACT PROJECT -2025

By

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April 2026

These studies were financed by JT Mining, Inc.

Cover photo: Johnson River looking downstream, ½ mile below Kona Creek confluence.

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Beth Evers (ADF&G) assisted with all field activities. Al Ott and Ken Bouwens (ADF&G) provided peer and technical review of this report, Chelsea Clawson (ADF&G), provided expertise with planning and preparation, and Olivia Edwards (ADF&G) processed periphyton samples. Andi Parrott (ADF&G) assisted with contracting and financing tasks. Thank you all for your valued contribution.

EXECUTIVE SUMMARY

The Johnson Tract Project, on the west side of Cook Inlet, is currently being explored by JT Mining for its mineral potential. The Alaska Department of Fish and Game Habitat Section established an aquatic studies monitoring program in 2023 focused on collecting baseline data that reflect stream conditions in the Johnson Tract lease area.

Water quality parameters, periphyton concentrations, aquatic invertebrate numbers and diversity, fish catches, and element concentrations in fish and stream sediments are monitored to establish baseline conditions, inform future planning, and to track changes over time. Currently, monitoring occurs at two sites, one in the Johnson River (Upper Johnson) and one in Kona Creek (Kona Creek) which is a tributary of the Johnson River. Sampling in 2025 occurred on August 2nd, 3rd, and 4th.

Streamflow in the region is dynamic, affected by the proximity of Cook Inlet and the Chigmit Mountains. A substantial high-water event occurred shortly before and affected 2024 sampling results for chlorophyll-a concentrations (periphyton) and macroinvertebrate densities. Water levels in 2025 were moderate and consistent prior to sampling and periphyton and macroinvertebrate levels in 2025 were similar to 2023 levels when compared to 2024 levels.

Mean chlorophyll-a concentrations (periphyton) in 2025 at Upper Johnson and Kona Creek were similar to concentrations documented in 2023. Concentrations in 2024, when sampling occurred shortly after a high-water event, were an order of magnitude lower than both 2023 and 2025.

Similar to periphyton levels, benthic macroinvertebrate densities at Upper Johnson and Kona Creek in 2025 were similar to densities documented in 2023. Densities in 2024 were an order of magnitude lower than results from 2023 and 2025 at both sites. The benthic macroinvertebrate communities at both sites were dominated by the order Diptera, family Chironomidae, which has been the case for all three years of monitoring.

In 2025, eleven Dolly Varden were retained at Upper Johnson, and eight Dolly Varden were retained at Kona Creek and analyzed for whole body concentrations of arsenic, cadmium, copper, lead, mercury, selenium, silver, and zinc. Mean concentrations of elements in Dolly Varden were similar between sites and were within the range of observed results from 2023 and 2024.

Five sediment grab samples were collected at each site in 2025 and analyzed for aluminum, arsenic, cadmium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc. Manganese and nickel were added to the suite of elements analyzed in sediment in 2025. Element concentrations in sediments were similar in 2025 to previous years with some exceptions. Only one grab sample was collected from each site in 2023 and 2024.

Minnow trap catch rates for Dolly Varden in 2025 were similar to 2024 at Upper Johnson. Minnow trap catch rates for Dolly Varden in 2025 were lower at Kona Creek compared to 2024.

INTRODUCTION

The Johnson Tract Project (Johnson Tract) is located near tidewater on the west side of Cook Inlet in Southcentral Alaska between Tuxedni and Chinitna Bays. The tract is currently being explored by JT Mining, Inc. (JT Mining) under a lease agreement with Cook Inlet Region, Inc. (CIRI) which has mineral and surface rights in the upper Johnson River watershed and in adjacent drainages. The Johnson Tract, originally explored from 1982 to 1995, was inactive for almost 25 years prior to acquisition by JT Mining in 2019. JT Mining conducted seasonal exploration surface drilling programs from 2019 to 2024 with a focus on delineating the high-grade Johnson Tract ore deposit (JT Deposit). In July of 2024, JT Mining was acquired by Contango Ore Inc. (Contango), headquartered in Fairbanks, Alaska.

The Alaska Department of Fish and Game (ADF&G), Habitat Section, developed a monitoring program focused on collecting baseline data on a select number of parameters that reflect stream conditions in the Johnson Tract lease area. Two aquatic monitoring sites (or reaches) were established near the JT Deposit (Table 1). One site is located in the mainstem Johnson River (Upper Johnson; Figure 1). The other site is located in Kona Creek (Kona Creek; Figure 2) which is a tributary of the Johnson River. Monitoring sampling was conducted at these sites on August 2nd - 4th, 2025 and previously in 2023 and 2024 on similar dates.

PURPOSE

The purpose of this program is to document the baseline condition, abundance and composition of biological communities, as well as water quality conditions, and element concentrations in whole body Dolly Varden and sediments in the Johnson River watershed. Collecting aquatic baseline data and preparing a technical report will provide useful information for future permit applications and to monitor changes over time.

STUDY AREA

The project area is on the east side of the Chigmit Mountains and within the subpolar marine climate of Cook Inlet. This coastal area is often foggy and wet, with an average annual rainfall of 100 to 200 centimeters.

The Johnson River valley is about 35 km long between the headwaters and Cook Inlet. The Upper Johnson River, upstream of the mainstem ADF&G monitoring reach, is about 9 km long (including the Johnson Glacier) and drains an area of approximately 28 km^2. Kona Creek is about 8 km long from its headwaters at an alpine glacier to its confluence with the Johnson River. Kona Creek, upstream of the ADF&G Kona Creek monitoring reach is about 7 km long and drains an area of approximately 14 km^2. The aquatic monitoring reach in the Johnson River (Upper Johnson) is about 2 km downstream from the JT Deposit and 3.5 km downstream of the Johnson Glacier. The monitoring reach in Kona Creek is about 2 km upstream of the confluence of Kona Creek and the Johnson River. The Upper Johnson site is hydrogeologically connected to the JT Deposit as it is directly downstream. Kona Creek flanks the east side of the JT Deposit and is separated hydrogeologically from the JT Deposit by a tight fault, known as the Dacite Fault. Both sites are on relatively stable stream reaches containing riffles and are wadeable during moderate to low flows (Figure 3).

The streams at the monitoring sites are both anadromous reaches. The Johnson River monitoring site is near the upper extent of anadromy for Dolly Varden (*Salvelinus malma*) and coho salmon (*Oncorhynchus kisutch)* and the Kona Creek site is near the upper extent of anadromy for Dolly Varden. Lower Kona Creek supports Dolly Varden from the mouth to a barrier falls located about 2.5 km upstream. The creek does not support fish populations above the falls based on surveys conducted by ADF&G. The Johnson River supports anadromous Dolly Varden throughout most of its length (lower 24.5 km). The lower 22 km of the Johnson River supports coho salmon (*Oncorhynchus kisutch*), while the lower 7 km supports chum (*O. keta*) and pink salmon (*O. gorbuscha*). Slimy sculpin (*Cottus cognatus*), coastrange sculpin (*C. aleuticus*), ninespine stickleback (*Pungitius pungitius*), and threespine stickleback (*Gasterosteus aculeatus*) are also found in the drainage.

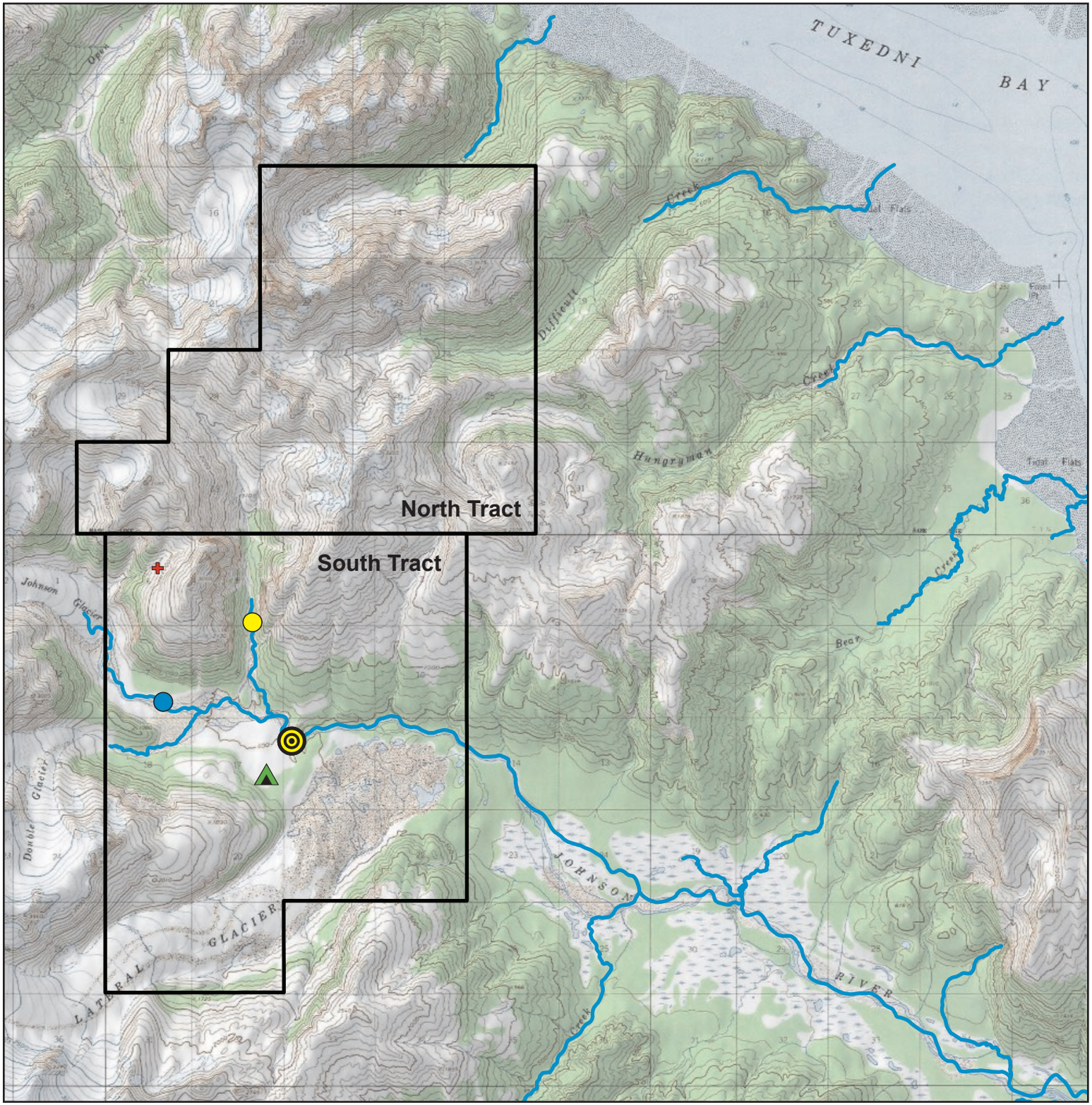
Table 1. Johnson Tract aquatic studies monitoring locations

Site	Longitude	Latitude	Elevation
Upper Johnson	60.09986 N	152.951146 W	148 ft.
Kona Creek	60.11238 N	152.922986 W	161 ft.

Water quality, periphyton and macroinvertebrate sampling occurred within 100 feet of listed coordinates and minnow traps were set within 750 feet.

Figure 1. Johnson River monitoring reach (Upper Johnson) looking upstream on August 2, 2025, at approximately 390 cfs.

Figure 2. Kona Creek monitoring reach (Kona Creek) looking upstream on August 3, 2025, at approximately 185 cfs.



Johnson Tract Watershed Overview

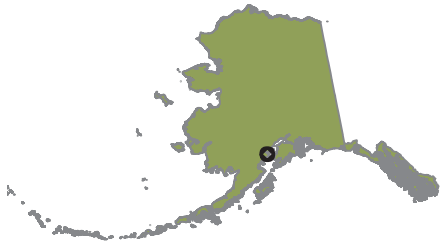
Figure 3

ADF&G Biomonitoring Locations

- Upper Johnson
- Kona Creek

- Streamgage (JR-1)
- Johnson Tract Camp
- Anadromous Waters
- Johnson Tract Lease Boundaries
- Johnson Tract Deposit

Map Produced by
the Department of Fish & Game
2/19/2026



METHODS

We review data sets annually to ensure accuracy and consistency with modifications to the methods; corrections and updates are reported in the document and appendices. The most recent technical report presents the current data sets and should be used to analyze data from previous years.

Our sampling technique provides a snapshot of the water quality, which may vary throughout the year with changing flows, input sources (groundwater vs. runoff), or other variables. However, we try to sample in the same locations during the same times annually to provide baseline information to document the naturally occurring conditions in the surface water.

WATER QUALITY

Water quality data were collected at both monitoring sites from 2022 to 2025 using a hand-held YSI Pro Plus multiparameter meter (temperature, dissolved oxygen [DO], pH, and conductivity) and a Hach 2100Q meter (turbidity).

PERIPHYTON

Periphyton were sampled directly from submerged cobble in a riffle section of the stream reach. Sampling is scheduled in the latter half of the summer, ideally during a time of stable, moderate to low flow when sampling can be conducted safely, and to ensure that the submerged cobble had been wetted continuously for the previous 30 days. Samples were collected during moderate flow conditions (~390 cfs at Upper Johnson and ~185 cfs at Kona Creek) in 2025. Ten samples were analyzed from each monitoring reach. The USEPA Rapid Bioassessment Protocols for use in Streams and Wadeable Rivers were followed with additional replicates per site to increase sample precision (Barbour et al. 1999). This modified approach is described below and follows the protocols as detailed in Bradley (2017).

Ten flat rocks, larger than 25 cm^2, were collected from a submerged riffle area of the streambed. A 5 cm by 5 cm square of high-density flexible foam was placed in the middle portion of the rock. All material around the foam square was scrubbed with a toothbrush and rinsed from the rock with water from the stream. The scrubbing process was repeated twice, with the toothbrush rinsed between each step. The foam square was removed from the rock, and algae remaining on the rock were brushed with a clean toothbrush and rinsed with water into a filter receptacle with a 0.45 µm glass fiber filter. The material on the toothbrush was also rinsed onto the filter with stream water. The foam square and toothbrush were cleaned in between samples. Water was removed from the filter using a hand vacuum pump. After extracting most of the water (i.e., ¼ inch of water remains above the glass fiber filter), 3 to 5 drops of saturated $MgCO_3$ were added (no solid $MgCO_3$) while gently swirling the filter receptacle to ensure the entire sample received a light coating. Pumping continued until the water was gone and the filter was dry.

The glass filter was removed from the pump and folded over, so the sample material was protected on the inside of the filter. Each fiber filter was then placed on a paper coffee filter, and the coffee filter was folded to entirely cover the fiber filter(s). The filters were then placed in a labeled, sealable plastic bag, with silica gel desiccant added. The sample bag was then placed in a cooler

with ice. Immediately upon returning to the Johnson Tract base camp, the samples were frozen and kept frozen until analyzed.

Periphyton samples were sent to the ADF&G office in Fairbanks and were processed in the manner described in Ott et al. (2010). Samples were analyzed using a spectrophotometer and a standardized reference solution derived from fresh spinach leaves. Total chlorophyll-a, -b, and -c were calculated using the tri-chromatic equation (American Public Health Association 2012). Chlorophyll-a (Chl-*a*) is the primary algal pigment required for photosynthesis found in algae. Algae may also contain appreciable amounts of accessory pigments, chlorophyll-b (Chl-*b*) and chlorophyll-c (Chl-*c*). The various taxonomic groups of algae differ greatly in their content of Chl-*b* and Chl-*c*.

Additionally, phaeophytin was calculated to determine if any Chl-*a* conversion occurred, and to correct concentrations for the presence of phaeophytin. Phaeophytin-corrected Chl-*a* (mg/m^2) results were used for data analysis. In 2025, periphyton biomass sampling was conducted on August 2.

AQUATIC INVERTEBRATES

ADF&G used a Hess Sampler to collect aquatic benthic macroinvertebrate (BMI) samples. Samples were collected on August 2nd, 2025. Five replicate samples were collected from one riffle within each reach. The diameter of the Hess Sampler is 331 mm, encompassing an area of 0.086 m^2 and the mesh size is 243 µm. The sampler was pushed into the substrate and held in place (with the cod end of the net trailing downstream) while rocks were scrubbed in the water column which flowed into the trailing net. Large cobbles were scrubbed thoroughly inside the sampler and then discarded downstream. The rest of the substrate was worked and scrubbed inside the sampler with cobbles and larger gravels examined for invertebrates. The substrate inside the sampler was scrubbed for a couple of minutes ensuring the entire substrate, to approximately 10 cm depth, was thoroughly disturbed. After removing the sampler from the stream, the net was washed from the outside to ensure that no organisms were clinging or stuck to the net. The contents of the net were rinsed into a 500-mL sample jar using isopropyl alcohol from a squirt bottle. More alcohol was added to the sample jar to ensure the entire sample was submerged. The sampler was rinsed before a subsequent sample was collected slightly upstream and laterally adjacent to the previous sample.

In the lab the macroinvertebrate samples were identified to the lowest practical taxonomic level using Merritt and Cummings (1996, 2008), Pennak (1989), and Stewart and Oswood (2002). Most insect taxa were able to be identified to genus. Only individuals that could be confirmed as whole organisms were counted. A random sample of 10% subsamples (1 sample) was selected for ID and sorting audit and reviewed by a second taxonomist for discrepancies. Additionally, this sample was resifted through to confirm picking accuracy.

Invertebrate density was calculated by dividing the total number of macroinvertebrates (5 samples/site) by the total area sampled (0.43 m^2). Taxa richness is reported as the total number of unique taxon collected per site. The number of EPT taxa (Orders Ephemeroptera, Plecoptera, and Trichoptera) were counted and reported. EPT taxa richness can be an indicator of water quality and generally decrease with environmental degradation (Rinella and Bogan 2007, Shaftel et al. 2025).

ELEMENT CONCENTRATIONS AND CATCH METRICS IN DOLLY VARDEN

Juvenile Dolly Varden were collected on August 3rd and 4th, 2025 at both monitoring reaches using minnow traps baited with salmon eggs. In 2025, 10 minnow traps were set at both sites on August 2nd and retrieved on August 3rd. Traps were fished as close to 24 hours as logistics allowed. Because of low catch rates of Dolly Varden within our target range for retention (7 fish at each site) after this initial set, a second set of 10 traps was fished between August 3rd and 4th. The second set resulted in 4 more fish retained at Upper Johnson and 1 more fish retained at Kona Creek. Catch per unit effort (CPUE) results were normalized to 24 hours for each trap (reported CPUE is fish/trap/24 hours).

Dolly Varden, between 90 and 140-mm fork length (FL), were retained for whole body element analyses. Only 11 Dolly Varden were analyzed from Upper Johnson River in 2025 and 8 Dolly Varden were analyzed from Kona Creek. Fish were selected from this length range to ensure minimum weight requirements for laboratory analyses and to minimize age-related variability. Fish retained for element analyses were measured to fork length using a measuring board and weighed individually with a digital scale to the nearest tenth of a gram. Retained fish were handled with nitrile gloves and each fish was placed in an individually labeled plastic baggie and stored in an insulated cooler with ice packs. Fish not retained were returned to the sample reach. The goal at each site was to retain and analyze 15 Dolly Varden in the appropriate size range.

Retained Dolly Varden were transported back to the Johnson Tract Camp where they were immediately frozen. The frozen fish were then brought to Anchorage where they were placed in the freezers at the ADF&G office. The fish samples were kept frozen until prepared for shipment to the analytical lab for analysis. Samples were shipped to ACZ Laboratories in Colorado for analysis. ADF&G maintained written chain of custody for the samples.

Whole body analyses of juvenile Dolly Varden were tested for the following elements: arsenic, cadmium, copper, lead, mercury, selenium, silver, and zinc. At the laboratory, whole body fish samples were homogenized, freeze dried, and ground prior to element analyses. Analysis methods for each parameter are listed in the lab report included in Appendix C.

Element concentrations were reported as wet weight concentrations from the lab and converted to a dry weight basis (by dividing the sample wet weight by the percent solid) for this report. Results below their respective Method Detection Limit (MDL) are included in the results at the related MDL for analysis or comparison. When some results were below their respective Method Detection Limit (MDL) the MDL is shown as the minimum and when all results were below their respective Method Detection Limit (MDL), the average MDL is presented instead of results concentration.

Fulton's condition factor (K) was calculated for each fish using the equation given in Anderson and Neumann (1996):

$$K = \frac{W}{L^3} \times 100{,}000$$

where L is the fork length (mm) and W is the weight in grams.

ELEMENT CONCENTRATIONS IN SEDIMENT

Fine sediments (sand and silt with minor component of small gravels) were collected in each monitoring reach. Five samples were collected in each reach on August 2, 2025. For each sample, approximately 500 ml of fine sediment was scooped into wide mouth glass jars using latex gloves and disposable scoops from the bed of an actively flowing channel. Sediments were collected from the top 5 cm of the streambed. After collecting, the samples were placed in a cooler with frozen icepacks and transported back to the Johnson Tract Camp where they were placed in a freezer and later brought to Anchorage in a cooler with icepacks. Samples were stored in a freezer and shipped in a cooler packed with frozen icepacks until received by the analytical laboratory.

Samples were shipped to ACZ Laboratories in Colorado for analysis. Sediment samples were analyzed for the following elements: aluminum, arsenic, cadmium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc. Manganese and nickel had not been analyzed for previous years. Samples were air dried and screened (2 mm sieve) at the lab. Analysis methods for each parameter are listed in the lab report included in Appendix D.

Element concentrations were reported as wet weight concentrations from the lab and converted to dry weight (by dividing the sample wet weight by the percent solid) for this report. Results below their respective Method Detection Limit (MDL) are included in the results at the related MDL for analysis or comparison.

The data were compared with the threshold effects concentrations (TEC) and the probable effects concentrations (PEC) for inorganics in freshwater sediment guidelines developed by the National Oceanic and Atmospheric Administration (NOAA; Buchman 2008). The guidelines are based on results of controlled laboratory bioassays, where element concentrations below the TECs rarely affect survival and growth of aquatic life, and element concentrations above the PECs can affect aquatic life survival and growth.

RESULTS AND DISCUSSION

WATER QUALITY

Water quality measurements were collected during the August aquatic monitoring effort. Dissolved oxygen (DO) concentrations were high in both systems (≥13.75 mg/L). Streams with a saturation value of 90% or greater, or greater than 9 mg/L are considered healthy (Bjornn and Reiser 1991). ADF&G measured DO concentrations at Upper Johnson and Kona Creek have consistently been above 11 mg/L in all three years of monitoring.

Turbidity was higher at Upper Johnson (26.47 NTU versus 3.96 NTU at Kona), while the temperature was higher at Kona Creek (4.41 °C versus 2.64 °C at Upper Johnson). Both differences are likely due to the higher input of glacial meltwater in the Johnson River which consistently has a higher turbidity and lower temperature than Kona Creek.

Conductivity was 21 µS/cm at both sites, which is the lowest recorded to date by ADF&G. Due to a malfunctioning probe, pH was not collected in 2025. Water quality results are shown in Table 2.

Table 2. Water quality data at Johnson Tract aquatic studies monitoring sites.

Date	Temp. (°C)	DO (mg/L)	pH	Cond. (µS/cm)	Turbidity (NTU)
Johnson River					
September 22, 2022[1]	4.12	13.56	7.45	28	--
August 8, 2023	2.27	14.50	6.82	36	58.8
August 13, 2024	2.23	11.72	6.55	33	93.12
October 17, 2024	2.19	11.75	7.09	66	1.71
August 2, 2025	2.64	14.10	--	21	26.47
Kona Creek					
September 22, 2022	5.72	12.73	7.31	36	--
August 8, 2023	7.45	12.76	7.16	47	7.25
August 13, 2024	6.41	11.35	6.86	34	3.51
October 17, 2024[2]	3.07	11.69	6.31	39	0.25
August 2, 2025	4.41	13.76	--	21	3.96

[1] – collected 1 mile upstream of aquatic studies site
[2] – collected 1 mile downstream of aquatic studies site

PERIPHYTON

Sampling occurred on August 2, 2025, with water levels at approximately 390 cfs at Upper Johnson and 210 cfs at Kona Creek. Water levels had been relatively consistent during the previous two weeks and were descending when we collected samples. Mean chlorophyll-a (Chl-*a*) concentrations at the Upper Johnson site were 6.73 mg/m^2 and at Kona Creek they were 3.80 mg/m^2. Zero samples were below the instrument detection limit in 2025 compared to 2024 when half of the samples were below. The low chlorophyll levels in 2024 are most likely attributed to a

high-water event (greater than bankfull) that occurred a week prior to sampling that likely mobilized the streambed and potentially scoured rocks. Periphyton levels (*chlorophyl-a*) at both monitoring sites were close to 5 mg/m^2 in 2023. The relatively low and variable periphyton biomass is like other glacial systems in Alaska as periphyton are sensitive to cold water temperatures, disturbance, changes in water quality, and turbidity (Krull, 2025).

The 2025 samples contained 92% Chl-*a* at Upper Johnson and 90% Chl-*a* at Kona Creek which was similar to 2023 but varied from 2024 when samples were collected shortly after a high-water event (greater than bankfull). The 2025 samples from Upper Johnson contained 8% Chl-*c* and samples from Kona Creek contained 10%. None of the samples from either monitoring reach contained measurable levels of Chl-*b* (Table 3). Mean Chl-*a* concentrations for both sampling reaches for all years are presented in Table 3 and Figure 4 and 5. Individual 2025 sample chlorophyll concentrations from the Johnson Tract can be found in Appendix A.

Table 3. Water quality data at Johnson Tract monitoring sites.

Sample Date	Chl-*a* (mg/m^2)	Chl-*b* (mg/m^2)	Chl-*c* (mg/m^2)
Upper Johnson			
8/8/23	4.72 ±2.23	0.0 ±0.01	0.47 ±0.29
8/13/24	0.18 ±0.14	0.05 ±0.03	0.1 ±0.03
8/2/25	6.73 ±5.54	0.0 ±0.00	0.55 ±0.27
Kona Creek			
8/8/23	5.11 ±1.30	0.0 ±0.00	0.59 ±0.10
8/13/24	0.23 ±0.23	0.05 ±0.02	0.07 ±0.03
8/2/25	3.80 ±1.01	0.0 ±0.00	0.41 ±0.10

Note: Chl-*a, -b, and -c* mean density ± 1SD

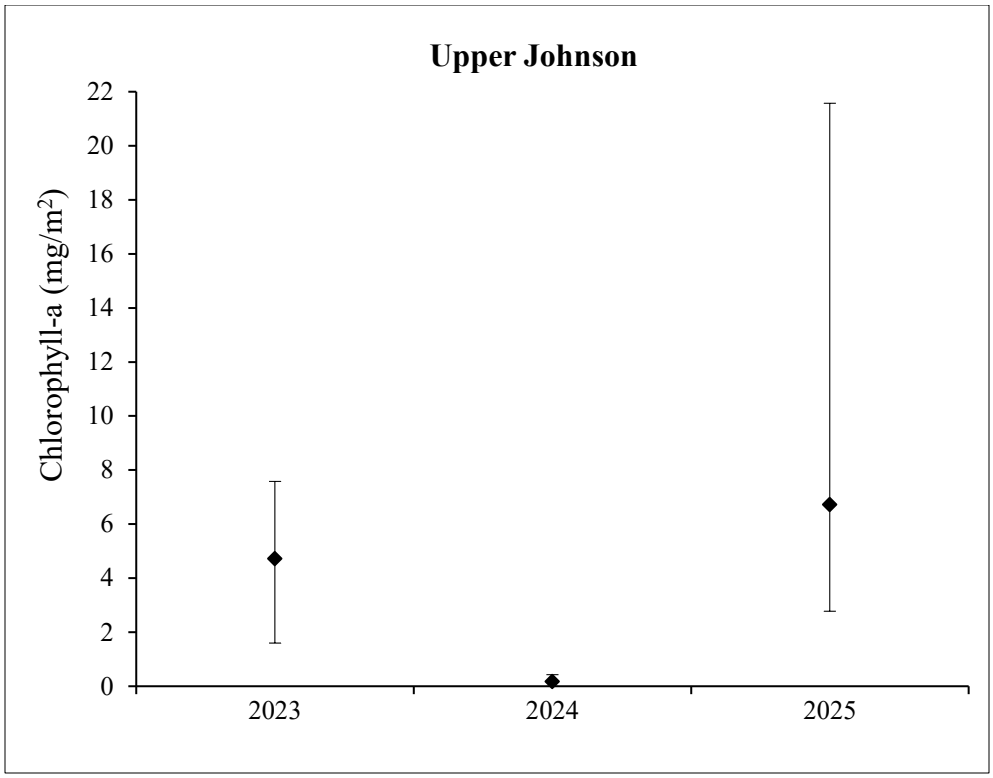


Figure 4. Mean Chl-*a* concentrations (markers) with minimum and maximum values (bars) for Upper Johnson monitoring reach, 2023-2025.

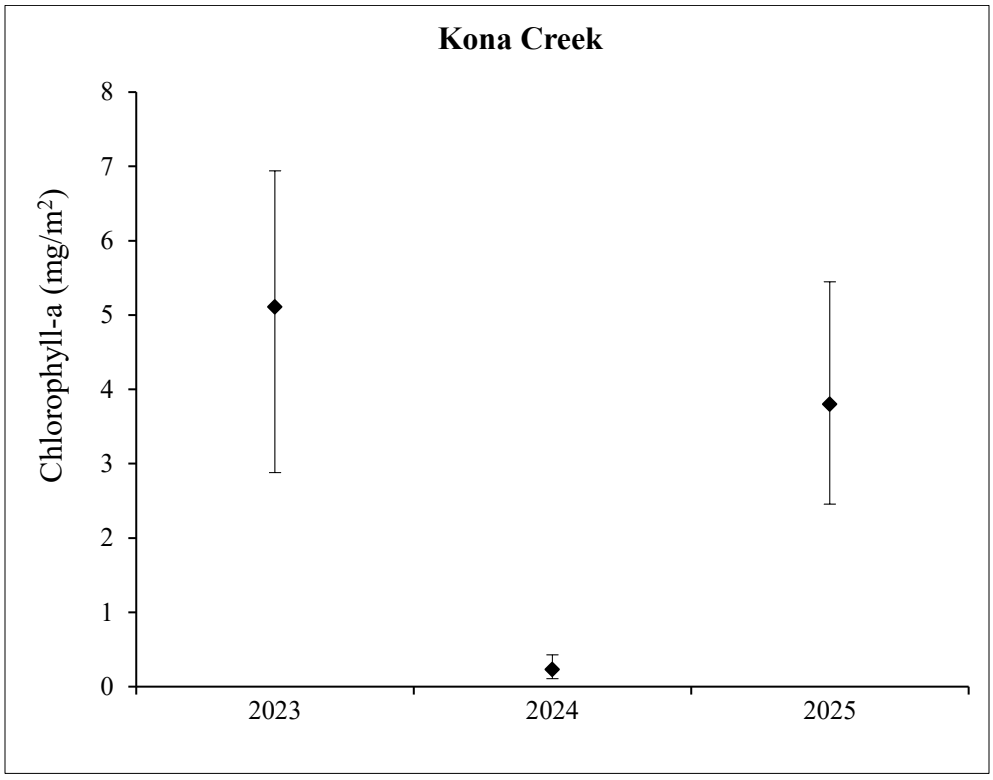


Figure 5. Mean Chl-*a* concentrations (markers) with minimum and maximum values (bars) for Kona Creek monitoring reach, 2023-2025.

AQUATIC INVERTEBRATES

The laboratory subsample (10%) audit/review conducted by a second taxonomist found no discrepancies with the initial invertebrate identification. The subsample was also resifted to confirm picking accuracy which achieved a 4.86% picking rate (9 out of 185 individuals missed) which is within the 10% acceptability threshold typical for taxonomic work. Benthic macroinvertebrate densities were higher in 2025 than previous years at both sites. Water levels from June through July 2025, prior to sampling, were relatively stable.

At Upper Johnson, nine different taxa were identified. Total estimated macroinvertebrate density was 4,349 invertebrates per m^2 in 2025 (Table 4, Figure 6). In the Kona Creek reach, 18 different taxa were identified with an estimated density of 3,070 invertebrates per m^2 (Table 5, Figure 6).

The number of EPT taxa at Upper Johnson was six, which is the highest recorded to date, while the EPT proportion of invertebrates was 5.1%, the lowest recorded to date, due to a large abundance of chironomids. The number of EPT taxa at Kona Creek was 10 while the EPT proportion of invertebrates was 11.4% (Figure 7). Ephemeroptera (mayflies) was the most common order present in the EPT community in both reaches as it was in 2023 and 2024 (Figure 8) with a limited number of Plecoptera and even fewer Trichoptera.

The number of taxa has remained relatively consistent at Upper Johnson over three years of monitoring, while density has been variable. Both density and taxa richness have been variable at Kona Creek where taxa richness, number of EPT taxa, and BMI density were lowest in 2024.A full summary of macroinvertebrate sampling results can be found in Appendix B.

Kona Creek has consistently had a greater variety of taxa present than Upper Johnson, but Upper Johnson has had a higher density in two of the three years of monitoring. Overall, densities are relatively similar between the sites, with Kona Creek containing greater diversity. The Johnson River has a higher proportion of glacial melt runoff relative to Kona Creek and the Upper Johnson site is higher in its respective watershed than the Kona Creek site, both of which could be a factor in taxa richness. The order Diptera dominated the benthic macroinvertebrate community at both sites in 2025, as it has in previous years. At Upper Johnson the order Diptera has comprised 88% to 95% of the benthic macroinvertebrate community and at Kona Creek the order Diptera has comprised 70% to 87% of the community (2023-2025). Most of the Diptera counts are from the family Chironomidae which are fast/early colonizers that can easily adapt to changing habitats and can exercise more than one feeding strategy (Entrekin et al. 2007) and are common in glacial and dynamic systems in Alaska.

Table 4. Johnson Tract benthic macroinvertebrate data summaries for Upper Johnson monitoring reach, 2023 to 2025.

	Upper Johnson		
	8/8/2023	8/13/2024	8/2/2025
Mean BMI density (per m^2)	1,749	302	4,349
Total BMI taxa	10	8	9
Number of EPT taxa	3	3	6
Percent of EPT insects	6.25%	8.7%	5.1%
Percent of Chironomidae (dominant taxa)	91.6%	88.2%	94.5%

Table 5. Johnson Tract benthic macroinvertebrate data summaries for Kona Creek monitoring reach, 2023 to 2025.

	Kona Creek		
	8/8/2023	8/13/2024	8/2/2025
Mean BMI density (per m^2)	2,574	156	3,070
Total BMI taxa	24	10	18
Number of EPT taxa	11	4	10
Percent of EPT insects	8.67%	14.1%	11.1%
Percent of Chironomidae (dominant taxa)	87.4%	70.3%	85.8%

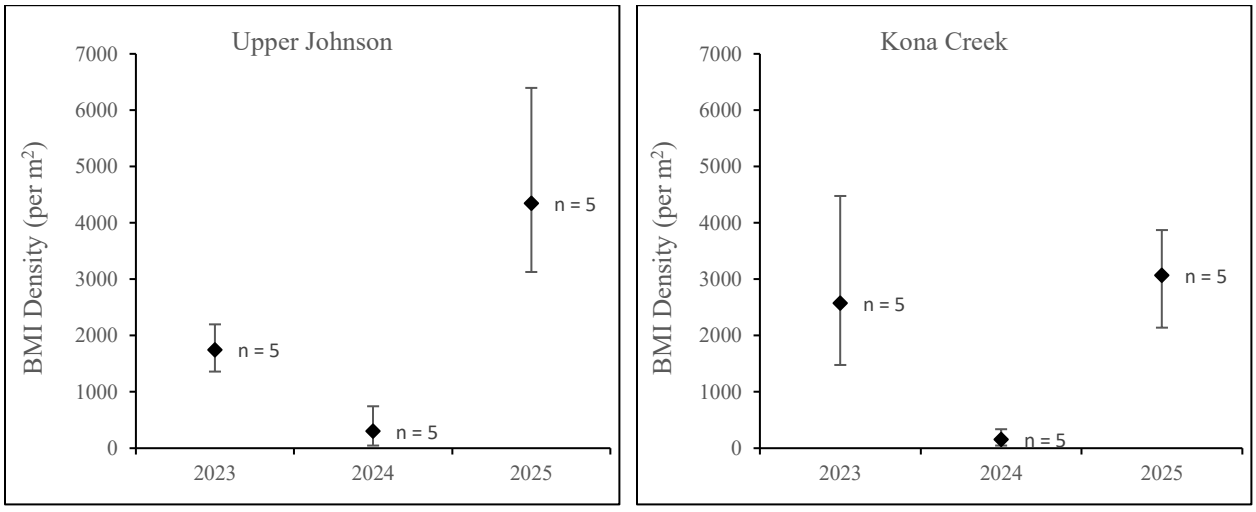


Figure 6. Mean benthic macroinvertebrate densities with minimum and maximum values (bars) at Upper Johnson and Kona Creek, 2023 to 2025.

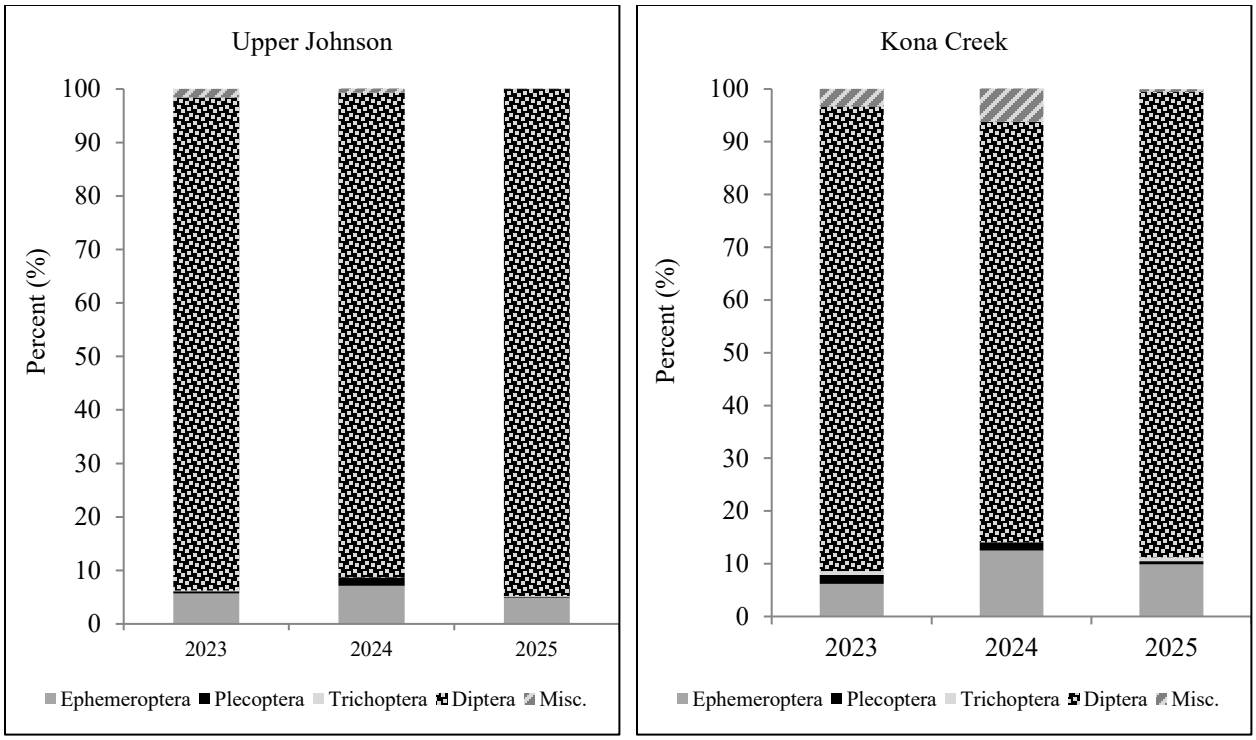


Figure 7. Benthic macroinvertebrate community composition by year at Upper Johnson and Kona Creek, 2023 to 2025.

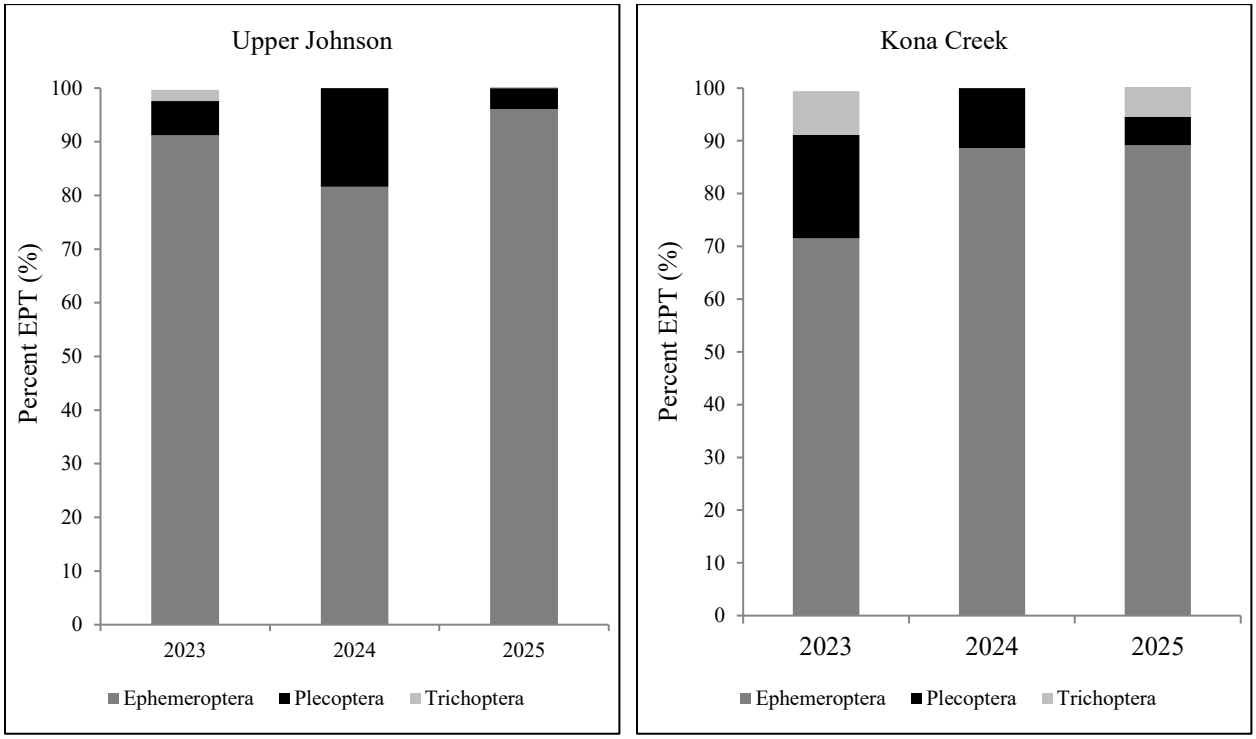


Figure 8. EPT community composition by year at Upper Johnson and Kona Creek, 2023 to 2025.

ELEMENT CONCENTRATIONS IN DOLLY VARDEN

In 2025, 11 Dolly Varden, measuring 88 to 137 mm (FL), were retained from Upper Johnson for whole-body element analysis. Eight (8) Dolly Varden were retained for analysis at Kona Creek and measured 105 to 138 mm (FL). Mean concentrations of elements in Dolly Varden were similar and within the range of observed results from 2023 and 2024.

A direct assessment of whole body element concentrations in fish can be used to measure the environmental conditions the fish was living in prior to sampling. Late summer or early fall is the preferred time to sample, as it allows juvenile Dolly Varden to have the maximum residency time within the monitoring reach before moving to overwintering areas.

The elements selected for analysis are known to have negative effects on fish in high concentrations in the aquatic environment. There is particular concern with copper, cadmium, selenium, and zinc in the aquatic environment because of their potential toxicity to salmonids (Scannell 2009, United States Environmental Protection Agency [USEPA] 1987, Baldwin et al. 2003). The USEPA lists each of these elements as Priority Pollutants (USEPA 2002), and some activities can lead to increased concentrations in water (Eisler 1993, USEPA 2016, Mebane 2006). Arsenic can bioaccumulate and have acute and chronic toxicity (Kumari et al. 2017). Mercury toxicity has negative effects on fish, especially neurodevelopment of fertilized eggs and young developing fish (MacFarlane 2004). Lead can have acute and chronic effects on fish gills and their immune system as well as cause neurotoxicity. USEPA aquatic life criteria are reported as concentrations of pollutants in water and therefore cannot be directly compared to reported element concentrations based on whole body homogenization of juvenile Dolly Varden.

In some 2025 samples, the element analyzed was not found above the method detection limit (MDL). Cadmium was not detected above the MDL in one sample from Upper Johnson. Lead was not detected above the MDL in six samples from Upper Johnson and five samples from Kona Creek. Silver was not detected above the MDL in any of the analyzed fish tissue, which was also the case in 2023 and 2024.

Dolly Varden element concentrations in 2025 were generally similar or within range of results from 2023 and 2024. Figures 9 through 16 depict the mean, minimum, and maximum dry weight concentrations of elements in analyzed fish tissue. The analytical results, wet to dry conversions, analysis methods, and full laboratory report can be found in Appendix C.

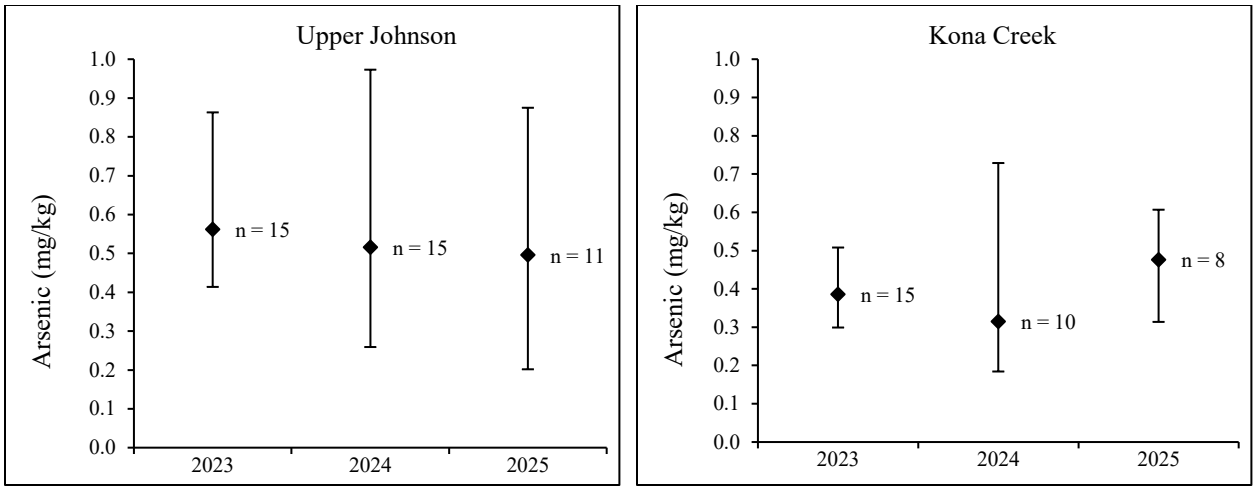


Figure 9. Mean whole body dry weight concentrations (diamond markers) for arsenic with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025.

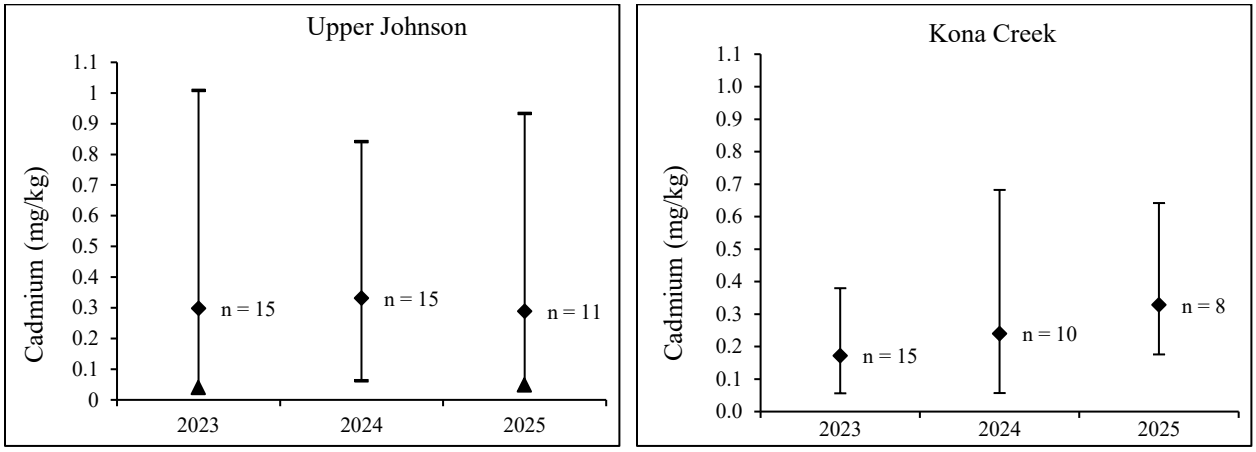


Figure 10. Mean whole body dry weight concentrations (diamond markers) for cadmium with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025. The MDL is shown as a triangle marker (as the minimum) with one result below MDL in 2023 and one in 2025 at Upper Johnson.

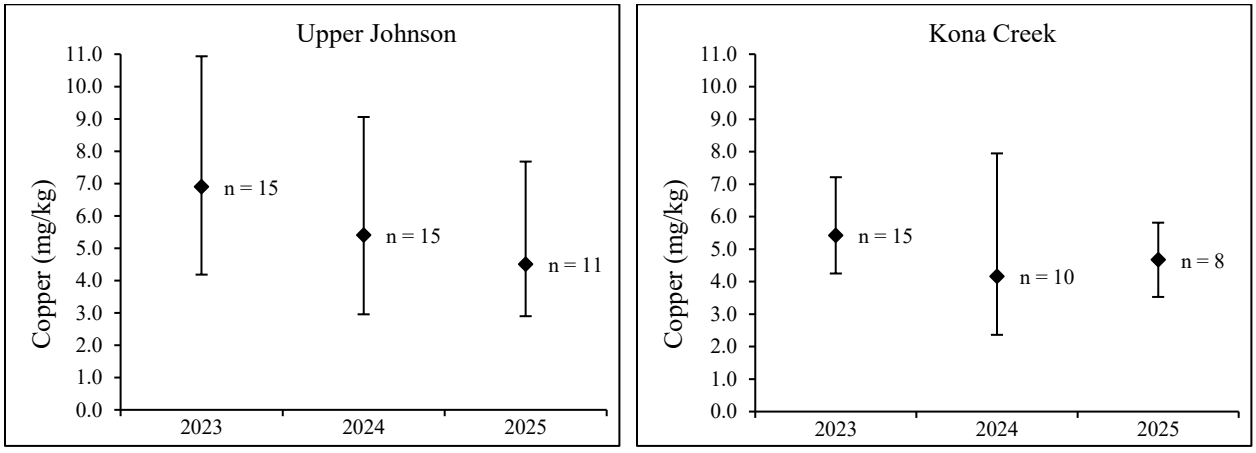


Figure 11. Mean whole body dry weight concentrations (diamond markers) for copper with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025.

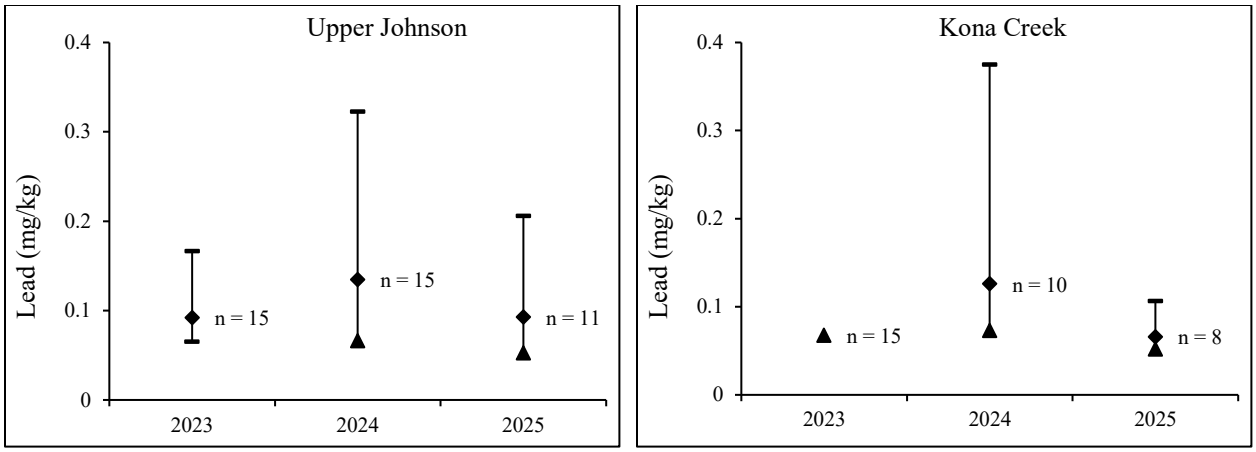


Figure 12. Mean whole body dry weight concentrations (diamond markers) for lead with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025. MDL shown as triangle marker when minimum results were below MDL. No results at Kona Creek were above the MDL in 2023.

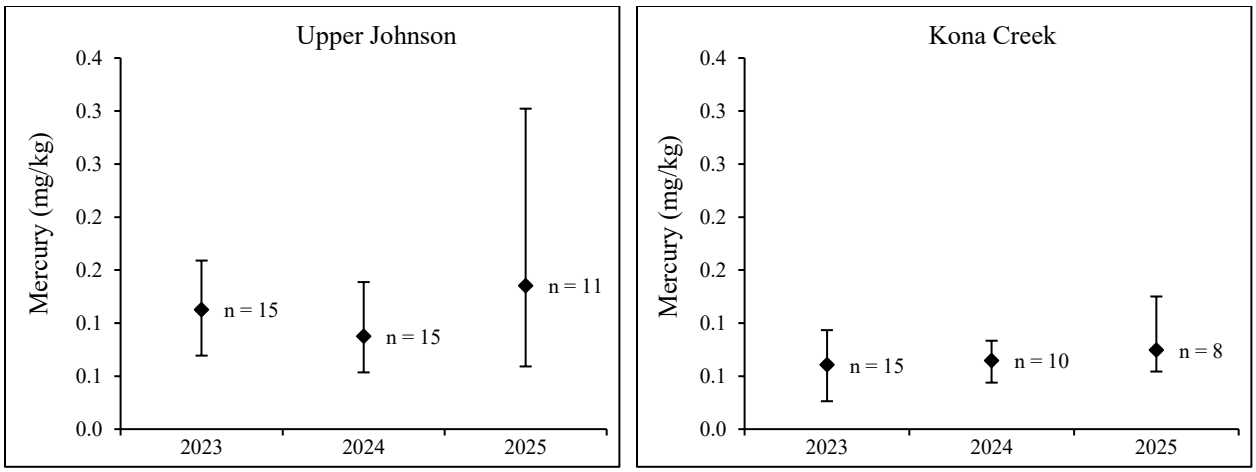


Figure 13. Mean whole body dry weight concentrations (diamond markers) for mercury with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025.

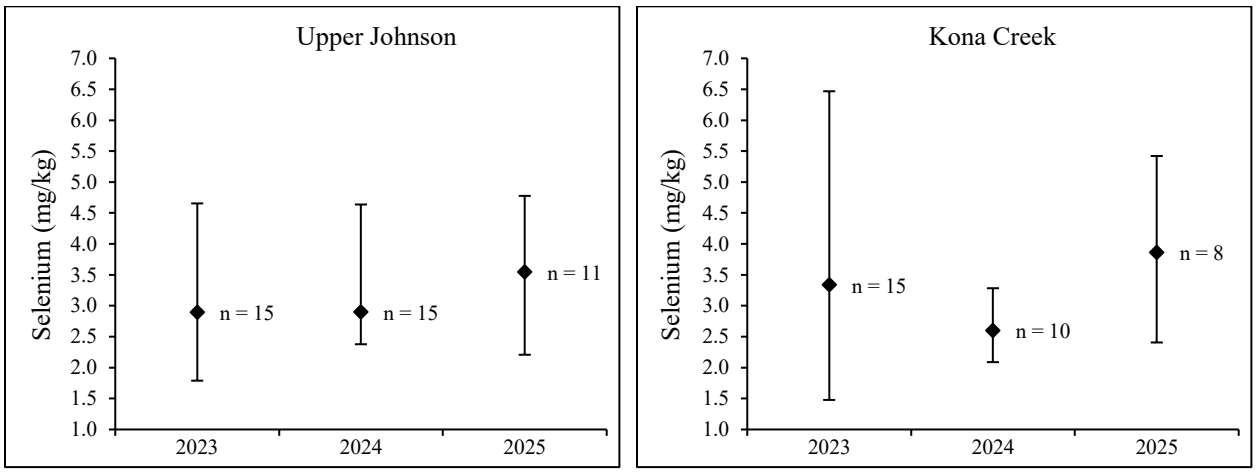


Figure 14. Mean whole body dry weight concentration (diamond markers) for selenium with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025.

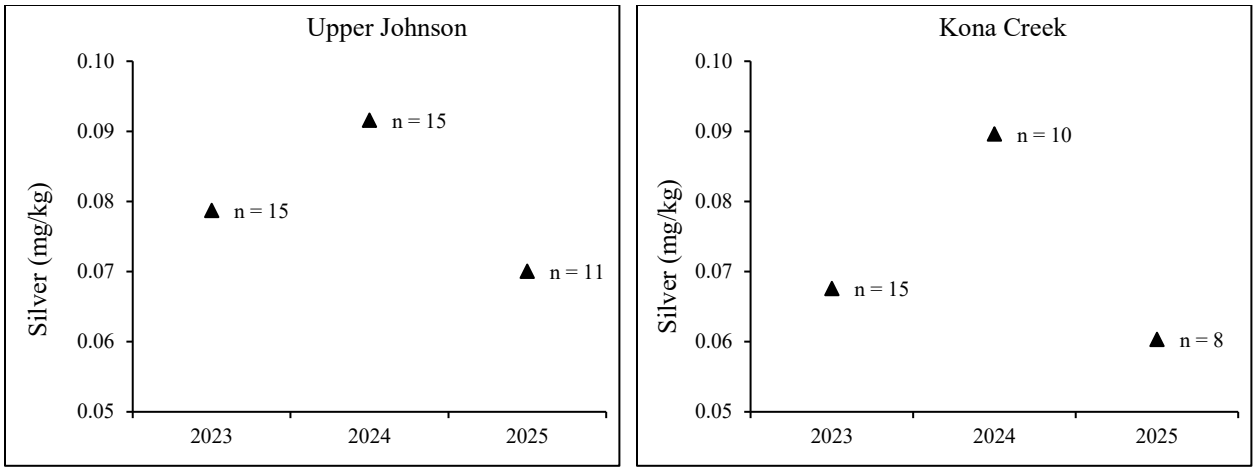


Figure 15. Mean whole body dry weight MDLs (triangle markers) for silver concentrations in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025. Results were below the MDL at both sites in 2023, 2024, and 2025.

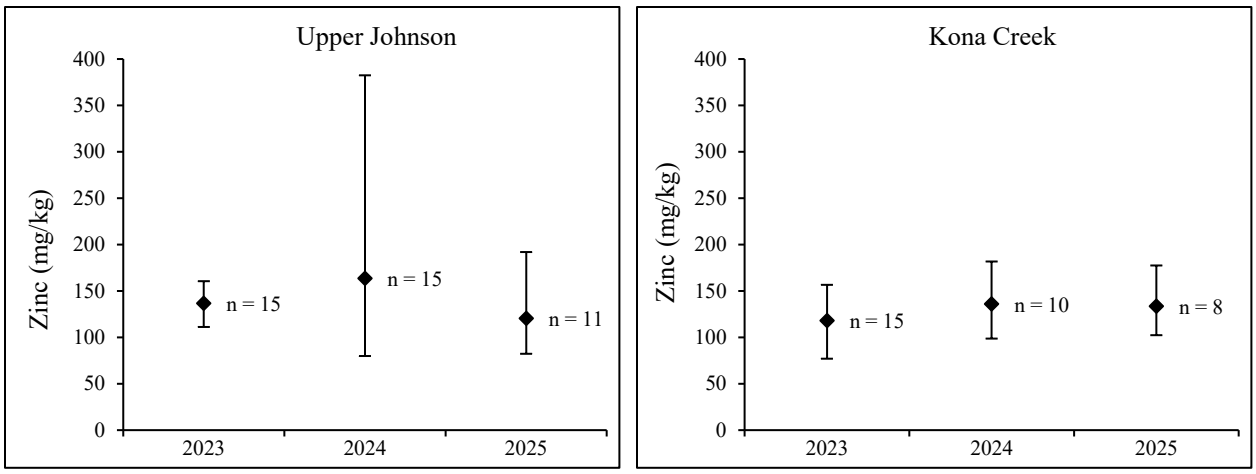


Figure 16. Mean whole body dry weight concentration (diamond markers) for zinc with min/max (bars) in juvenile Dolly Varden for Upper Johnson and Kona Creek, 2023 to 2025.

NOTE: *Zinc results were misreported in the Johnson Tract 2024 Aquatic Studies Report. Whole fish tissue results in the 2024 report labeled as Zinc (Figure 15) are the results for Selenium. Whole fish tissue results for Zinc (all years) have been corrected in this 2025 report.*

ELEMENT CONCENTRATIONS IN SEDIMENTS

Water bodies in the region of an ore deposit can exhibit higher than normal background element concentrations naturally because of the underlying geology. They can be monitored through sediments as erosion carries components of the local geology downstream. Monitoring the element concentration in sediments will provide baseline information on existing conditions prior to development.

Element concentrations in sediments at Upper Johnson and Kona Creek from 2023 to 2025 are presented in Figures 17-28. In 2025, five grab samples were collected at each site, although one of the samples from Kona Creek broke open during shipment and was not analyzed. Only one sample was collected from both sites in 2023 and 2024. Manganese and nickel were added in 2025 to the suite of elements analyzed.

All sample results from both sites in 2025 were below NOAA's PEC values and the PEC value is not depicted in the figures. All sample results in 2025 were below NOAA's TEC values except for copper. All sediment sample results in 2025 for copper were above the TEC at Upper Johnson while half of the sample results (2) for copper were above the TEC at Kona Creek (Figure 20). TEC and PEC values are not defined for aluminum, iron, manganese, selenium, and silver. Silver was not detected above the MDL in any of the sediment samples from Upper Johnson.

Element concentrations in sediments have been variable between years, but only one sample was collected in 2023 and 2024 (increased to five in 2025) and at this point it is a relatively small data set. Comparisons will become more meaningful over time after more years of baseline data is accumulated. Figures 17 through 28 depict the mean, minimum, and maximum dry weight concentrations of elements. The analytical results, wet to dry conversions, analysis methods, and full laboratory report can be found in Appendix D.

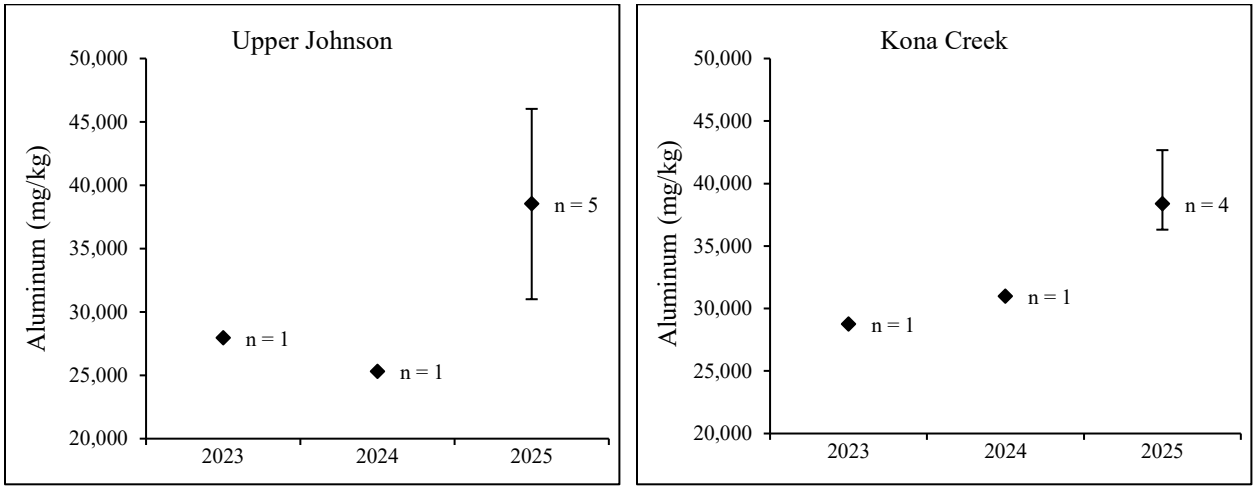


Figure 17. Mean element concentrations (diamond markers) in sediment with min/max (bars) for aluminum at Upper Johnson and Kona Creek, 2023 to 2025.

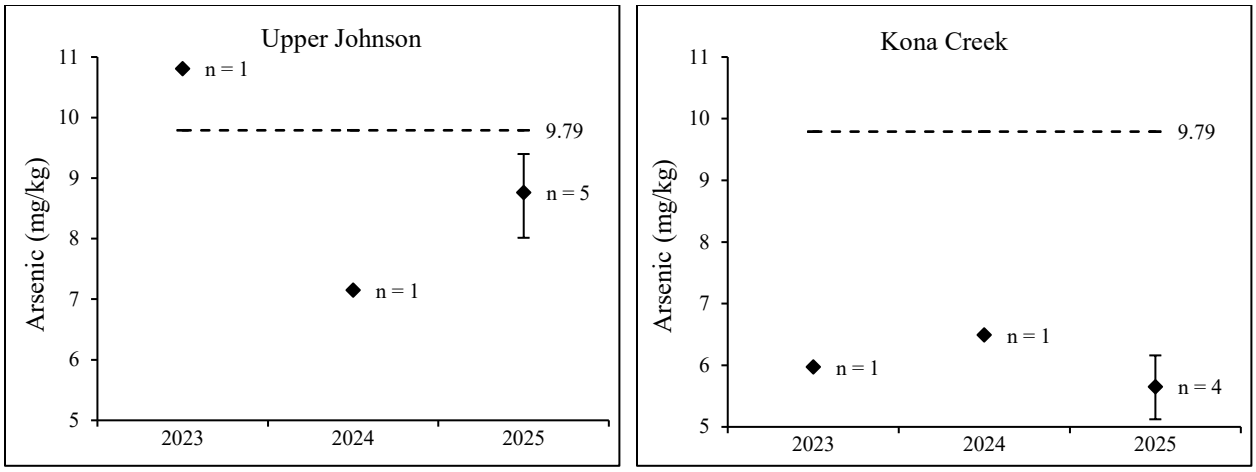


Figure 18. Mean element concentrations (diamond markers) in sediment with min/max (bars) for arsenic at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

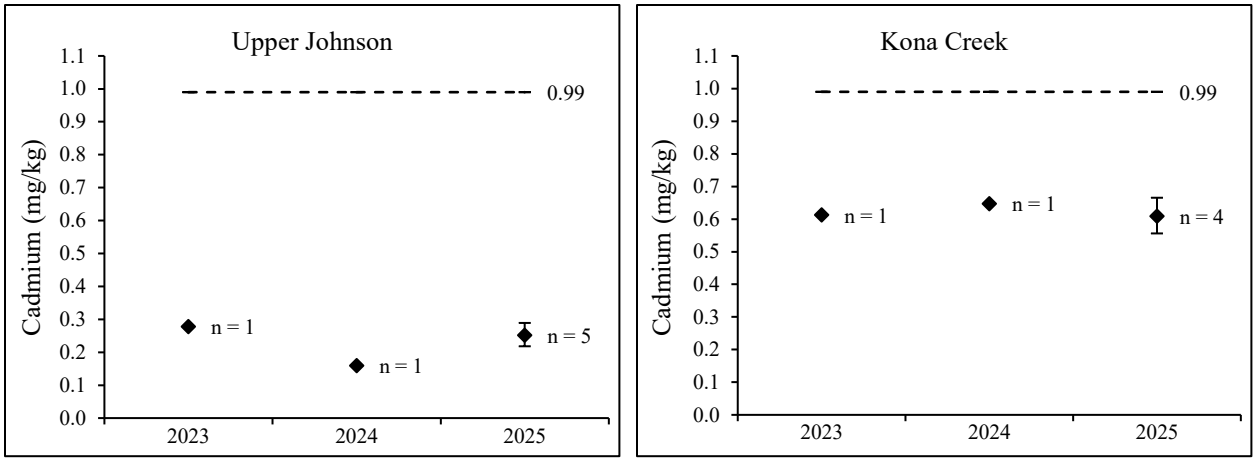


Figure 19. Mean element concentrations (diamond markers) in sediment with min/max (bars) for cadmium at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

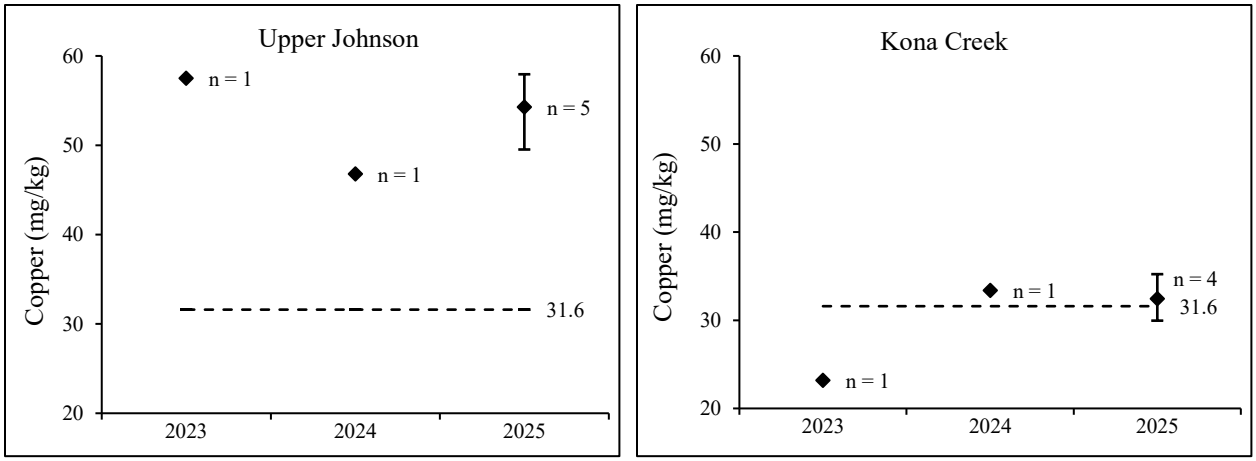


Figure 20. Mean element concentrations (diamond markers) with min/max (bars) in sediment for copper at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

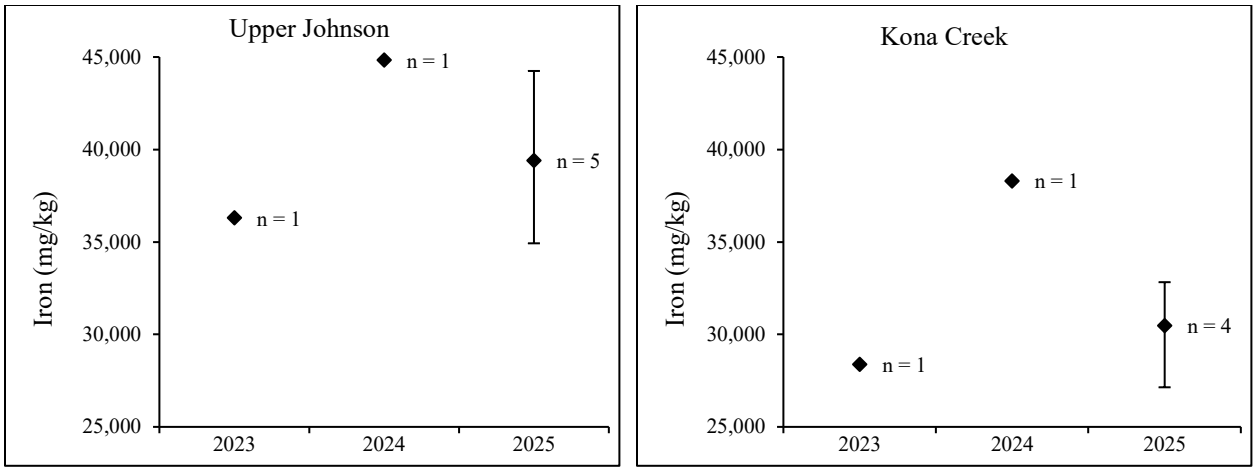


Figure 21. Mean element concentrations (diamond markers) with min/max (bars) in sediment for iron at Upper Johnson and Kona Creek, 2023 to 2025.

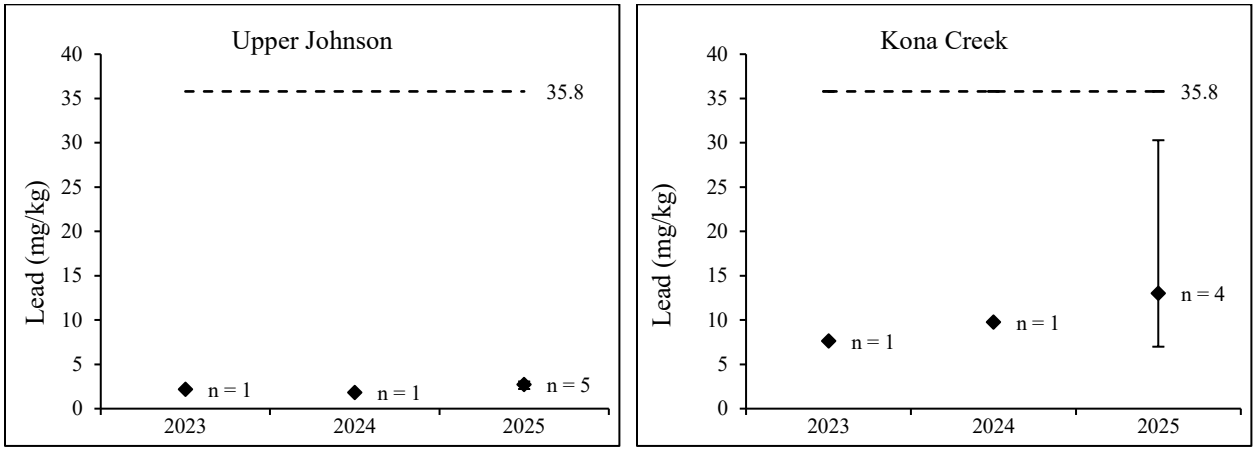


Figure 22. Mean element concentrations (diamond markers) in sediment with min/max (bars) for lead at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

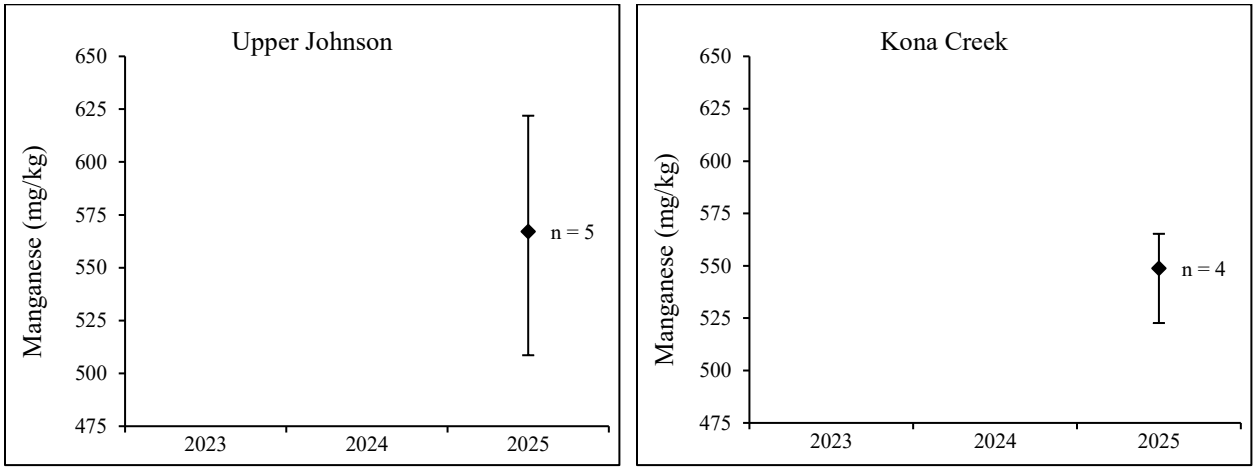


Figure 23. Mean element concentrations (diamond markers) in sediment with min/max (bars) for manganese at Upper Johnson and Kona Creek, 2025.

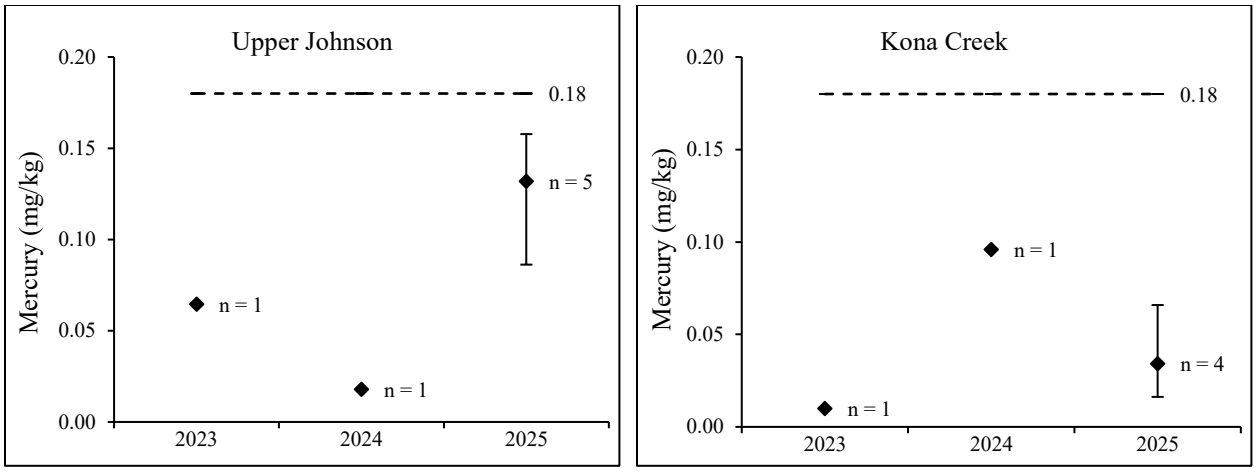


Figure 24. Mean element concentrations (diamond markers) in sediment with min/max (bars) for mercury at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

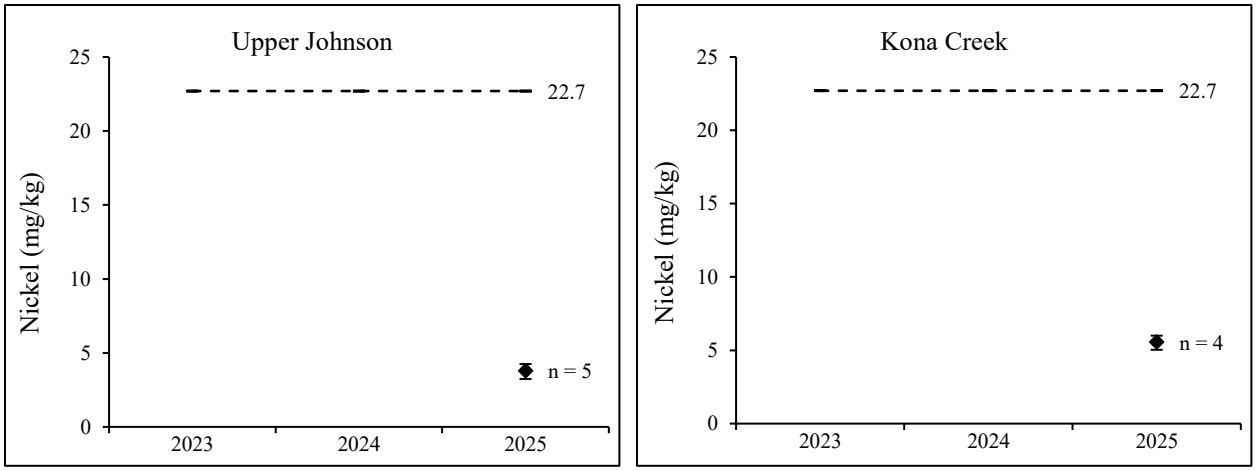


Figure 25. Mean element concentrations (diamond markers) in sediment with min/max (bars) for nickel at Upper Johnson and Kona Creek, 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

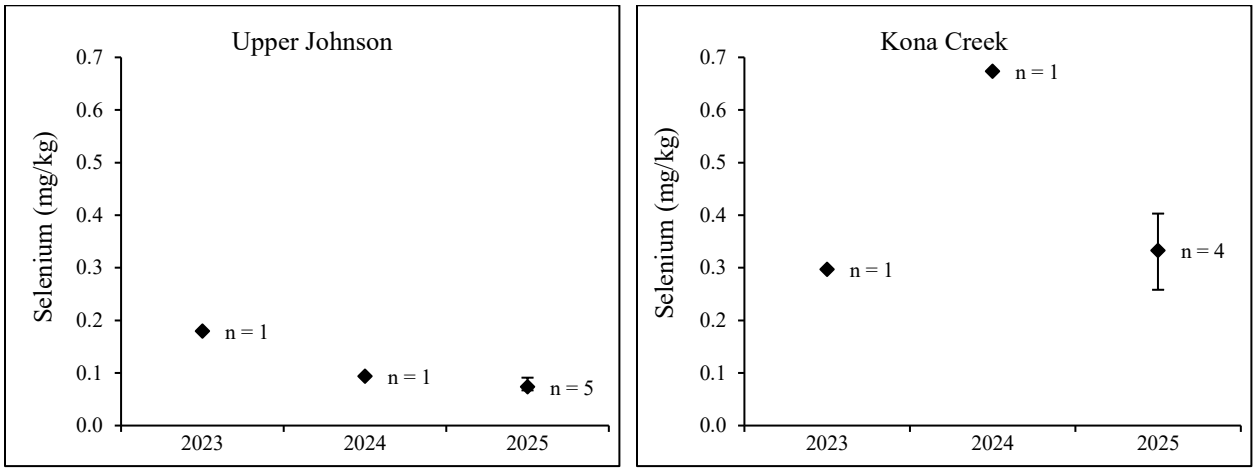


Figure 26. Mean element concentrations (diamond markers) in sediment with min/max (bars) for selenium at Upper Johnson and Kona Creek, 2023 to 2025.

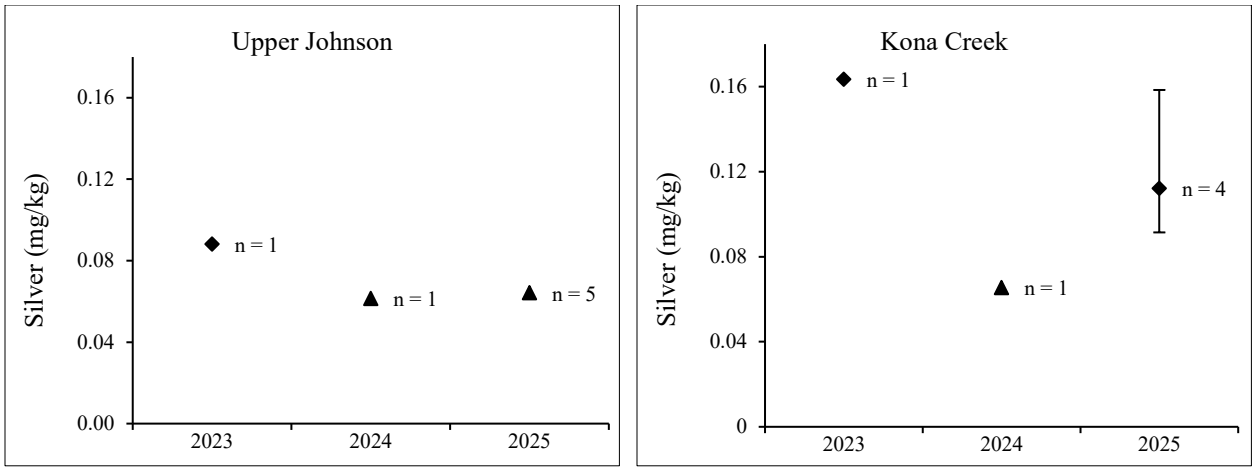


Figure 27. Mean element concentrations (diamond markers) and MDL (triangle markers), when results were below MDL, in sediment for silver at Upper Johnson and Kona Creek, 2023 to 2025.

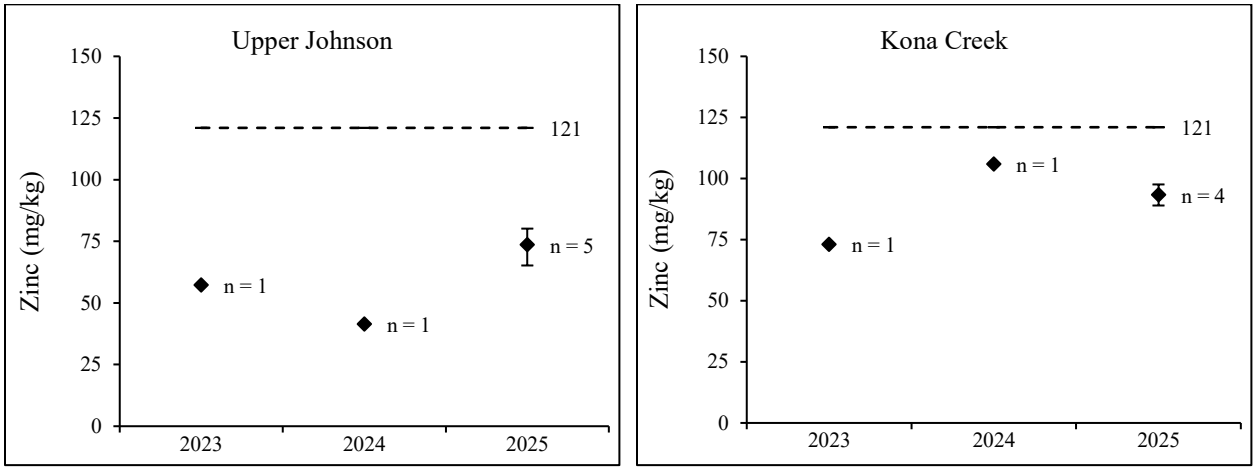


Figure 28. Mean element concentrations (diamond markers) in sediment with min/max (bars) for zinc at Upper Johnson and Kona Creek, 2023 to 2025. The dashed line represents the TEC for freshwater sediments (Buchman 2008).

JUVENILE DOLLY VARDEN CATCHES AND METRICS

Two overnight sets (10 traps each) were conducted at both sites in 2025, with each set fishing for 22 to 24 hours. We did not meet our target of 15 Dolly Varden (90-140 mm) for retention and whole-body element analysis in 2025.

A total of 40 Dolly Varden were captured (11 retained and analyzed) at Upper Johnson in 2025, compared to 39 in 2024. A single coho salmon (FL = 65 mm) also was captured at Upper Johnson which was the first documentation of salmon rearing in the Upper Johnson monitoring reach. Dolly Varden fork lengths were 43 to 137 mm at Upper Johnson representing at least two age classes based on length.

Eight Dolly Varden were captured (8 retained and analyzed) at Kona Creek in 2025, compared to 14 in 2024. Six of the minnow traps at Kona Creek were crushed or removed during the second night set, presumably by a bear and only four traps were intact upon retrieval. The fork lengths of Dolly Varden captured ranged from 105 mm to 138 mm at Kona Creek representing two age classes based on length.

Fish capture rates in 2025 at Upper Johnson were similar to 2024 results, but rates were much lower at Kona Creek in 2025. Catch rates were not recorded in 2023. The combined CPUE at Upper Johnson was 2.21 fish/trap/24 hours in 2025 compared to 2.66 fish/trap/24 hours in 2024 (Figure 29). The combined CPUE at Kona Creek was 0.59 in 2025 compared to 1.91 in 2024 (Figure 30). Catch data from traps compromised by bear activity were not included in the CPUE calculations. Results for individual minnow traps are listed in Appendix E.

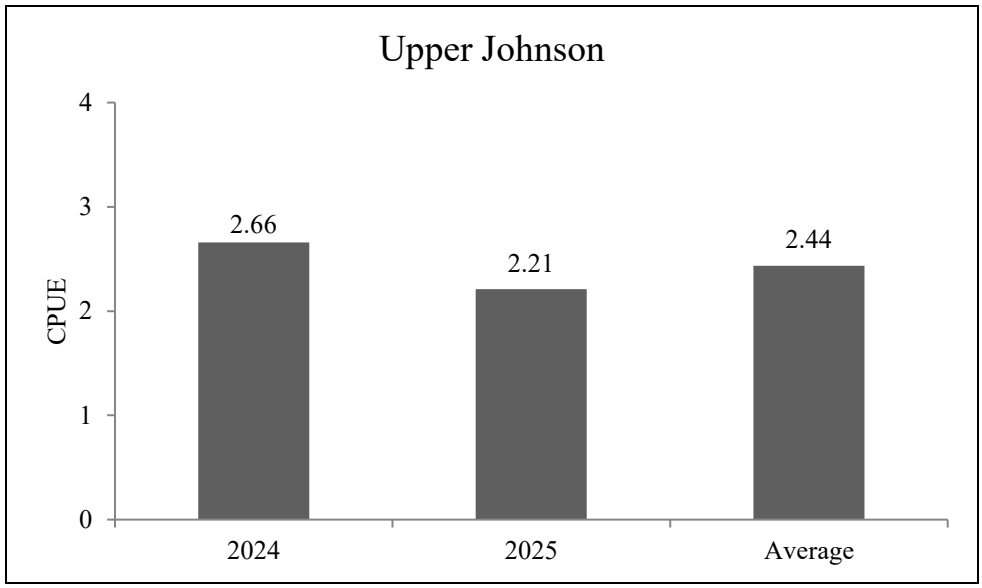


Figure 29. Total Fish CPUE at Upper Johnson.

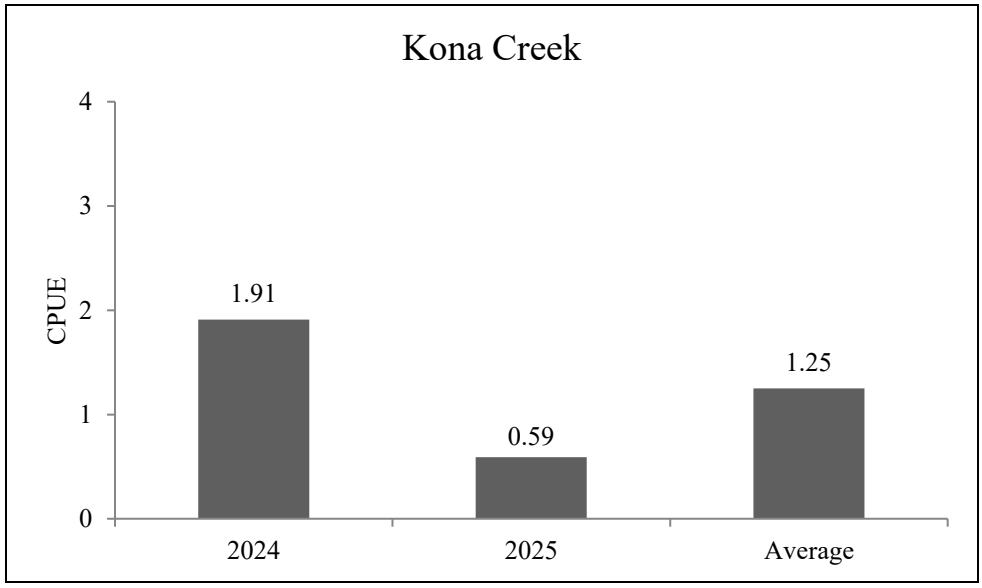


Figure 30. Total Fish CPUE at Kona Creek.

Weight-length data show similar relationships, within the small sample sizes, among captured Dolly Varden at both sites (Figure 31 and 32). The mean *K* (condition factor) of all fish captured at Upper Johnson was 1.10 in 2025, compared to 1.00 in 2024, both of which were higher than *K* values at Kona Creek which averaged 0.94 in both 2024 and 2025. The condition factor allows for comparisons across years and between sites, with higher *K* values generally indicating greater well-being (Zale et al. 2012).

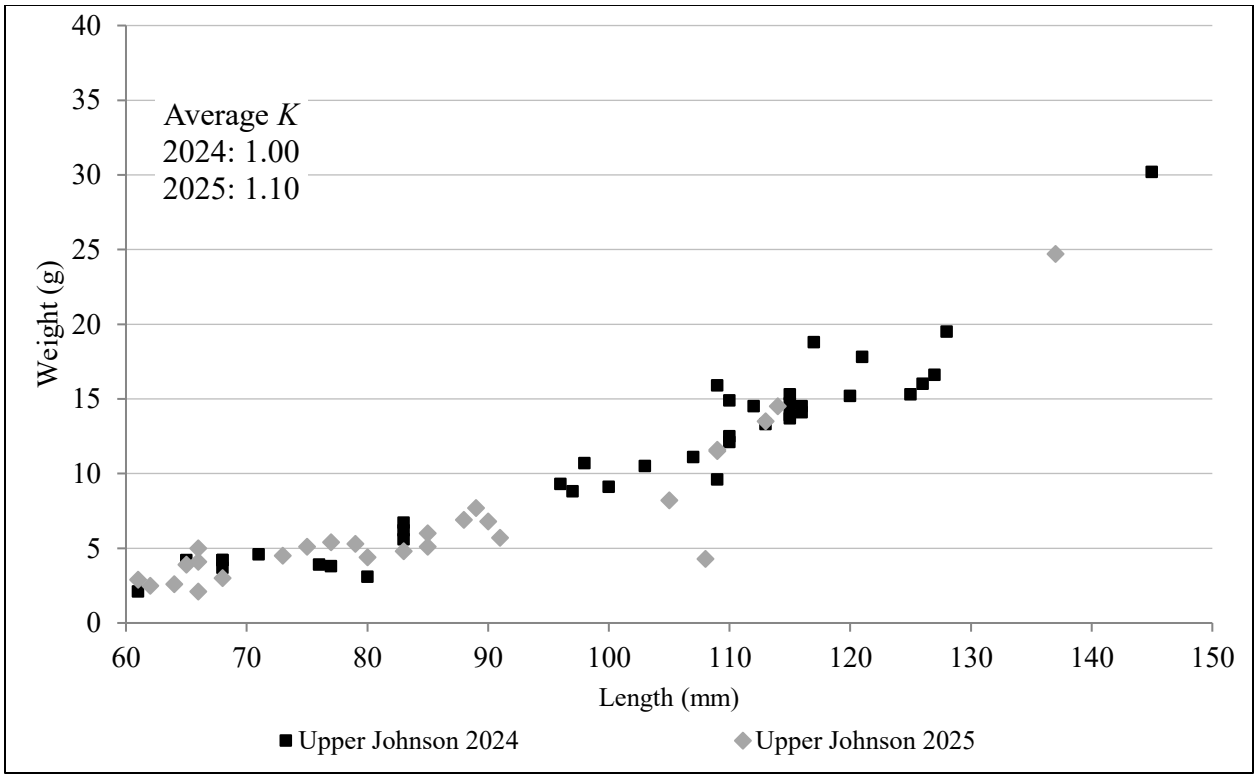


Figure 31. Dolly Varden length-weight data at Upper Johnson, 2024-2025.

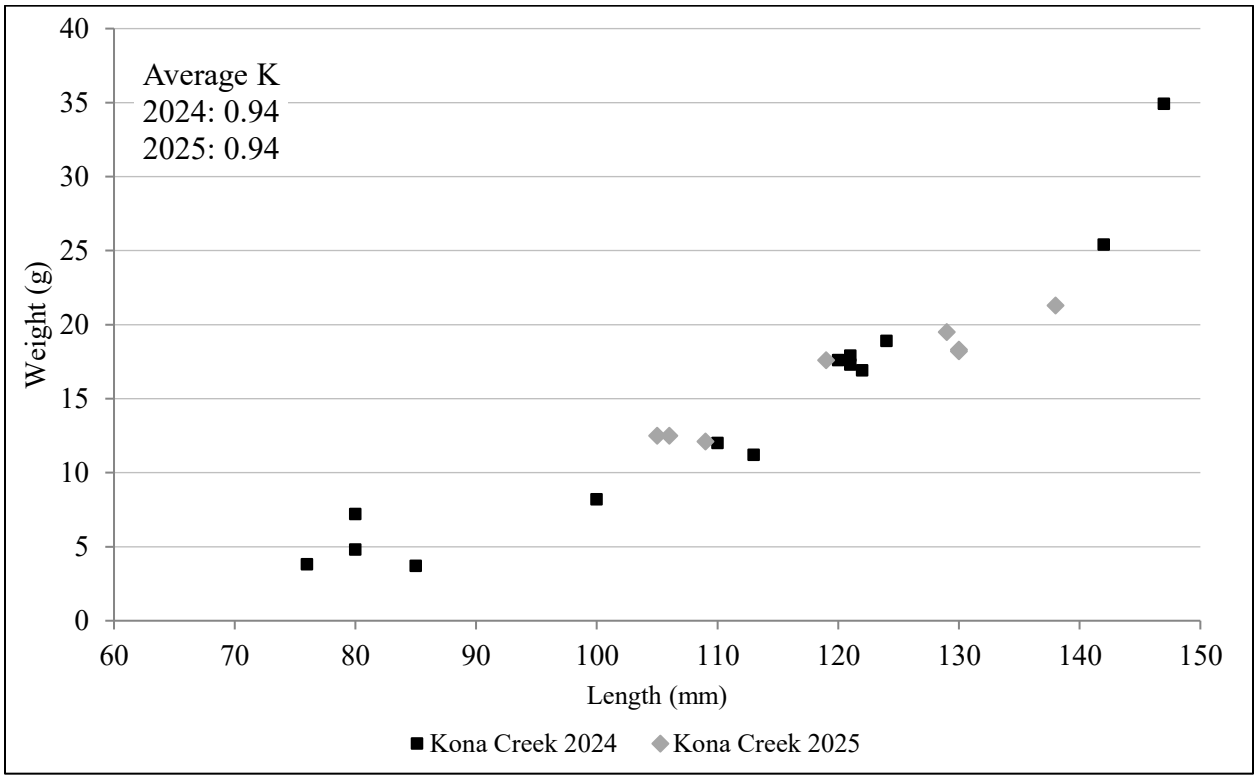


Figure 32. Dolly Varden length-weight data at Kona Creek, 2024-2025.

RECOMMENDATIONS

ADF&G recommends that baseline aquatic sampling continue at Johnson Tract as long as exploration activities are ongoing. The value of baseline data grows with time, and multiple years of baseline data more accurately capture the natural variability in site conditions prior to development, especially dynamic systems like the Johnson River.

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APPENDIX A. PERIPHYTON STANDING CROP, JOHNSON TRACT

2023

Daily vial no.	Site	Date collected	Date analyzed	Vial chl-a	Chl-a (mg/m^2)	Chl-a[1] (mg/m^2)	664/665 Ratio	Chl-b (mg/m^2)	Chl-c (mg/m^2)
37	Kona Creek	8/8/23	12/11/23	1.26	5.03	**4.70**	1.67	0.00	0.47
39	Kona Creek	8/8/23	12/11/23	1.87	7.50	**6.94**	1.66	0.00	0.74
41	Kona Creek	8/8/23	12/11/23	1.22	4.89	**4.59**	1.67	0.00	0.59
43	Kona Creek	8/8/23	12/11/23	1.41	5.63	**5.34**	1.68	0.00	0.66
45	Kona Creek	8/8/23	12/11/23	0.79	3.15	**2.88**	1.64	0.00	0.43
47	Kona Creek	8/8/23	12/11/23	1.77	7.08	**6.51**	1.65	0.00	0.66
49	Kona Creek	8/8/23	12/11/23	1.18	4.71	**4.27**	1.63	0.00	0.55
51	Kona Creek	8/8/23	12/11/23	1.49	5.94	**5.66**	1.69	0.00	0.65
53	Johnson River	8/8/23	12/11/23	1.93	7.72	**7.37**	1.69	0.00	0.91
55	Johnson River	8/8/23	12/11/23	0.75	3.01	**2.78**	1.65	0.04	0.16
57	Johnson River	8/8/23	12/11/23	0.70	2.79	**2.67**	1.69	0.00	0.28
59	Johnson River	8/8/23	12/11/23	1.68	6.73	**6.51**	1.71	0.00	0.44
61	Johnson River	8/8/23	12/11/23	0.41	1.65	**1.60**	1.71	0.00	0.17
63	Johnson River	8/8/23	12/11/23	1.83	7.32	**7.05**	1.70	0.00	0.60
65	Johnson River	8/8/23	12/11/23	1.06	4.24	**3.95**	1.66	0.00	0.55
67	Johnson River	8/8/23	12/11/23	0.83	3.33	**3.10**	1.66	0.00	0.38
69	Johnson River	8/8/23	12/11/23	1.22	4.89	**4.59**	1.67	0.00	0.20
71	Johnson River	8/8/23	12/11/23	2.02	8.08	**7.58**	1.67	0.00	0.99

Notes:

No Chl-a results below detection limit (0.09 mg/m^2) or above linear check (65.03 mg/m^2) in 2023 samples.

One sample was lost from Kona Creek and another sample from Kona Creek was not processed due to insufficient preservation.

[1] Phaeophytin corrected.

2024

Daily vial no.	Site	Date collected	Date analyzed	Vial chl-a	Chl-a (mg/m^2)	Chl-a[1] (mg/m^2)	664/665 Ratio	Chl-b (mg/m^2)	Chl-c (mg/m^2)
32	Upper Johnson	8/13/24	12/3/2024	0.02	0.09[2]	**0.00**[2]	1.00	0.02	0.15
33	Upper Johnson	8/13/24	12/3/2024	0.02	0.08[2]	**0.11**[2]	2.00	0.10	0.12
34	Upper Johnson	8/13/24	12/3/2024	0.12	0.50	**0.43**	1.57	0.07	0.10
35	Upper Johnson	8/13/24	12/3/2024	0.06	0.22	**0.21**	1.67	0.04	0.10
36	Upper Johnson	8/13/24	12/3/2024	0.02	0.09[2]	**0.11**[2]	2.00	0.03	0.05
37	Upper Johnson	8/13/24	12/3/2024	0.03	0.13[2]	**0.11**[2]	1.50	0.08	0.12
38	Upper Johnson	8/13/24	12/3/2024	0.06	0.22	**0.21**	1.67	0.04	0.10
39	Upper Johnson	8/13/24	12/3/2024	0.01	0.04[2]	**0.11**[2]	-	0.05	0.06
40	Upper Johnson	8/13/24	12/3/2024	0.01	0.04[2]	**0.11**[2]	-	0.05	0.06
41	Upper Johnson	8/13/24	12/3/2024	0.11	0.45	**0.43**	1.67	0.00	0.14
42	Kona Creek	8/13/24	12/3/2024	0.01	0.04[2]	**0.11**[2]	-	0.05	0.06
43	Kona Creek	8/13/24	12/3/2024	0.06	0.22	**0.21**	1.67	0.04	0.10
44	Kona Creek	8/13/24	12/3/2024	0.02	0.09[2]	**0.11**[2]	2.00	0.03	0.05
45	Kona Creek	8/13/24	12/3/2024	0.01	0.04[2]	**0.11**[2]	-	0.06	0.00
46	Kona Creek	8/13/24	12/3/2024	0.09	0.36	**0.32**	1.60	0.06	0.05
47	Kona Creek	8/13/24	12/3/2024	0.22	0.86	**0.85**	1.73	0.05	0.08
48	Kona Creek	8/13/24	12/3/2024	0.03	0.13[2]	**0.11**[2]	1.50	0.08	0.12
49	Kona Creek	8/13/24	12/3/2024	0.04	0.18	**0.21**	2.00	0.06	0.11
50	Kona Creek	8/13/24	12/3/2024	0.03	0.14	**0.21**	3.00	0.01	0.05
51	Kona Creek	8/13/24	12/3/2024	0.01	0.04[2]	**0.11**[2]	-	0.05	0.06

Notes:

[1] Phaeophytin corrected

[2] Chl-a results below detection limit (0.14 mg/m^2)

No results above linear check (69.02 mg/m^2) in 2024 samples.

2025

Daily vial no.	Site	Date collected	Date analyzed	Vial chl-a	Chl-a (mg/m^2)	Chl-a[1] (mg/m^2)	664/665 Ratio	Chl-b (mg/m^2)	Chl-c (mg/m^2)
42	Kona Creek	8/2/25	10/8/2025	1.21	4.85	**4.59**	1.68	0.00	0.50
43	Kona Creek	8/2/25	10/8/2025	1.45	5.81	**5.45**	1.67	0.00	0.50
44	Kona Creek	8/2/25	10/8/2025	0.95	3.79	**3.63**	1.69	0.00	0.44
45	Kona Creek	8/2/25	10/8/2025	1.29	5.16	**5.02**	1.71	0.00	0.59
46	Kona Creek	8/2/25	10/8/2025	0.86	3.43	**3.20**	1.67	0.00	0.36
47	Kona Creek	8/2/25	10/8/2025	1.14	4.57	**4.38**	1.69	0.00	0.41
48	Kona Creek	8/2/25	10/8/2025	0.91	3.66	**3.52**	1.70	0.00	0.30
49	Kona Creek	8/2/25	10/8/2025	0.74	2.97	**2.88**	1.71	0.00	0.32
50	Kona Creek	8/2/25	10/8/2025	0.77	3.06	**2.88**	1.68	0.00	0.28
51	Kona Creek	8/2/25	10/8/2025	0.64	2.56	**2.46**	1.70	0.00	0.35
52	Upper Johnson	8/2/25	10/8/2025	0.80	3.20	**3.10**	1.71	0.00	0.36
53	Upper Johnson	8/2/25	10/8/2025	1.56	6.22	**5.87**	1.68	0.00	0.58
54	Upper Johnson	8/2/25	10/8/2025	1.72	6.87	**6.51**	1.69	0.00	0.59
55	Upper Johnson	8/2/25	10/8/2025	1.11	4.44	**4.27**	1.70	0.00	0.39
56	Upper Johnson	8/2/25	10/8/2025	2.04	8.18	**8.01**	1.72	0.00	0.78
57	Upper Johnson	8/2/25	10/8/2025	2.00	8.01	**7.69**	1.70	0.00	0.63
58	Upper Johnson	8/2/25	10/8/2025	0.94	3.75	**3.63**	1.71	0.00	0.38
59	Upper Johnson	8/2/25	10/8/2025	1.01	4.02	**3.84**	1.69	0.00	0.38
60	Upper Johnson	8/2/25	10/8/2025	5.70	22.80	**21.57**	1.68	0.00	1.18
61	Upper Johnson	8/2/25	10/8/2025	0.73	2.93	**2.78**	1.68	0.00	0.26

Notes:

[1] Phaeophytin corrected

No Chl-a results below detection limit (0.08 mg/m^2) or above linear check (73.89 mg/m^2) in 2025 samples.

APPENDIX B. HESS BMI SAMPLE RESULTS, JOHNSON TRACT 2023

	Monitoring reach	
	Upper Johnson	Kona Creek
Sample date	8/8/2023	8/8/2023
Aquatic invertebrate taxa richness/site	10	24
EPT taxa richness/site	3	11
% EPT	6.25%	8.67%
% Ephemeroptera	5.72%	6.23%
% Plecoptera	0.4%	1.72%
% Trichoptera	0.13%	0.72%
% Aquatic Diptera	92.2%	88.1%
% Aquatic Chironomidae	91.6%	87.4%
% Miscellaneous aquatic invertebrates	1.6%	3.3%
% Dominant aquatic taxon	91.6%	87.4%
Hess Sampler area total (m^2)	0.43	0.43
Area/Hess Sampler (m^2)	0.09	0.09
Estimated total invertebrates/m^2	1,749	2,574
Standard deviation of aquatic invertebrate density	363	1,131
Total abundance of invertebrates[a]	752	1,107
Total abundance Ephemeroptera[a]	43	69
Total abundance Plecoptera[a]	3	19
Total abundance Trichoptera[a]	1	8
Total abundance Diptera[a]	693	975
Total abundance misc. invertebrates[a]	12	36
Average number invertebrates/Hess[b]	150	221
Average number Ephemeroptera/Hess[b]	9	14
Average number Plecoptera/Hess[b]	1	4
Average number Trichoptera/Hess[b]	0	2
Average number Diptera/Hess[b]	139	195
Average number misc. invertebrates/Hess[b]	2	7
Standard deviation invertebrates/Hess[b]	31	97
Total larval fish/site[b]	0	0

Notes:
[a] Corrected for subsampling.
[b] Five Hess samples per site.

2024

	Monitoring reach	
	Upper Johnson	Kona Creek
Sample date	8/13/2024	8/13/2024
Aquatic invertebrate taxa richness/site	8	10
EPT taxa richness/site	3	4
% EPT	8.66%	14.06%
% Ephemeroptera	7.09%	12.5%
% Plecoptera	1.5%	1.56%
% Trichoptera	0%	0%
% Aquatic Diptera	90.6%	79.7%
% Aquatic Chironomidae	88.2%	70.3%
% Miscellaneous aquatic invertebrates	0.8%	6.3%
% Dominant aquatic taxon	88.0%	69.3%
Hess Sampler area total(m^2)	0.43	0.43
Area/Hess Sampler (m^2)	0.09	0.09
Estimated total invertebrates/m^2	302	2,574
Standard deviation of aquatic invertebrate density	288.7	1,131
Total abundance of invertebrates[a]	130	67
Total abundance Ephemeroptera[a]	9	8
Total abundance Plecoptera[a]	2	1
Total abundance Trichoptera[a]	0	0
Total abundance Diptera[a]	115	51
Total abundance misc. invertebrates[a]	1	4
Average number invertebrates/Hess[b]	26	13
Average number Ephemeroptera/Hess[b]	2	2
Average number Plecoptera/Hess[b]	<1	<1
Average number Trichoptera/Hess[b]	0	0
Average number Diptera/Hess[b]	23	10
Average number misc. invertebrates/Hess[b]	<1	1
Standard deviation invertebrates/Hess[b]	25	10
Total larval fish/site[b]	0	0

Notes:
[a] Corrected for subsampling.
[b] Five Hess samples per site.

2025

	Monitoring reach	
	Upper Johnson	Kona Creek
Sample date	8/2/2025	8/2/2025
Aquatic invertebrate taxa richness/site	9	18
EPT taxa richness/site	6	10
% EPT	5.13%	11.14%
% Ephemeroptera	4.87%	9.86%
% Plecoptera	0.16%	0.61%
% Trichoptera	0.11%	0.68%
% Aquatic Diptera	94.8%	88.2%
% Aquatic Chironomidae	94.5%	85.8%
% Miscellaneous aquatic invertebrates	0.1%	0.6%
% Dominant aquatic taxon	94.5%	85.8%
Hess Sampler area total (m^2)	0.43	0.43
Area/Hess Sampler (m^2)	0.09	0.09
Estimated total invertebrates/m^2	4,349	3,070
Standard deviation of aquatic invertebrate density	1,377.8	633.2
Total abundance of invertebrates[a]	1,870	1,320
Total abundance Ephemeroptera[a]	91	130
Total abundance Plecoptera[a]	3	8
Total abundance Trichoptera[a]	2	9
Total abundance Diptera[a]	1,773	1,164
Total abundance misc. invertebrates[a]	1	8
Average number invertebrates/Hess[b]	374	264
Average number Ephemeroptera/Hess[b]	18.2	26
Average number Plecoptera/Hess[b]	0.6	1.6
Average number Trichoptera/Hess[b]	0.4	1.8
Average number Diptera/Hess[b]	355	233
Average number misc. invertebrates/Hess[b]	0.2	1.6
Standard deviation invertebrates/Hess[b]	118	54
Total larval fish/site[b]	0	0

Notes:
[a] Corrected for subsampling.
[b] Five Hess samples per site.

Data Sheet – Upper Johnson - 2025

Hess Samples from 2025: Number of invertebrates by family or genus (all life stages)								
Site:	**Upper Johnson**							
Date:	August 2, 2025	Sampled by:	J. Brekken, B. Evers (ADF&G)					
			Area (m^2) =	0.09	0.09	0.09	0.09	0.09
	Taxon		Sample Net =	1	2	3	4	5
Insecta	Ephemeroptera	Baetidae	*Baetis*	21	28	21	9	10
			Acentrella					
			not determined					
		Heptageniidae	*Cinygmula*					
			Epeorus			1	1	
		Ameletidae	*Ameletus*					
		Ephemerellidae	*Drunella*					
			Ephemerella					
	Plecoptera	Capniidae	*Capnia*					
			Eucapnopsis					
			Isocapnia					
			Paracapnia					
		Leutridae	Despaxia					
		Chloroperlidae	*Kathroperla*				1	
			Suwallia					
			not determined					
		Nemouridae	*Nemoura*					
			Ostrocerca					
			Podmosta					
			Zapada	1				
		Perlodidae	*Alloperla*					
			Isoperla		1			
			Perlomyia					
		not determined						
	Trichoptera	Brachycentridae	*Brachycentrus*					
		Limnephilidae	*Ecclosomyia*					
			not determined					
		Glossosomatidae						
		Ryachophiliide	*Ryachophilia*					2
		not determined						
	Diptera	Chironomidae		525	262	244	309	428
		Empididae	*Chelifera*					
			Clinocera					
			Oreogeton					
		Psychodidae						
		Tabanidae						
		Tipulidae	*Tipula*					
			Gonomyodes					
			Rhabdomastix					
			Hexatoma					
		Simuliidae	not determined	3		2		
		Ceratopogonidae						
	Coleoptera	Carabidae						
		Chrysomelidae						
		Curculionidae						
		Dytiscidae						
		Hydrophilidae						
		Hydroscaphidae						
		Staphylinidae						
Miscellaneous	Collembola	Entomobryidae						
		Neanuridae						
		Sminthuridae	*Sminthurus*					
		Poduridae						

Hess Samples from 2025: Number of invertebrates by family or genus (all life stages)								
Site:	**Upper Johnson**							
Date:	August 2, 2025	Sampled by:	J. Brekken, B. Evers (ADF&G)					
	Taxon		Sample Net =	1	2	3	4	5
Misc. (cont.)	Collembola (cont.)	Isotomidae						
	Lepidoptera	Pyralidae						
	Hymenoptera:Symphyta							
	Acari	Acarina						
	Oligochaeta					1		
	Ostracoda							
	Copepoda	Cyclopoida						
		Calanoida						
		Harpacticoida						
	Terrestrial Flies							
	Terrestrial Wasps							
	Misc. Terr. Arthropods							
	Nematoda							
	Platyhelminthes							
	Nematomorpha							
	Fish larvae	*Thymallus arcticus*						
		Salvelinus alpinus						
		Cottus cognatus						

Data Sheet – Kona Creek - 2025

Hess Samples from 2025: Number of invertebrates by family or genus (all life stages)								
Site:	**Kona Creek**							
Date:	August 2, 2025	Sampled by:	J. Brekken, B. Evers (ADF&G)					
			Area (m^2) =	0.09	0.09	0.09	0.09	0.09
	Taxon		Sample Net =	1	2	3	4	5
Insecta	Ephemeroptera	Baetidae	*Baetis*	15	22	6	7	30
			Acentrella					
			not determined					
		Heptageniidae	*Cinygmula*				1	4
			Epeorus	8	10	3	4	16
		Ameletidae	*Ameletus*					3
		Ephemerellidae	*Drunella*					
			Ephemerella					
			not determined			1		
	Plecoptera	Capniidae	*Capnia*					
			Eucapnopsis					
			Isocapnia					
			Paracapnia					
		Leutridae	Despaxia					
		Chloroperlidae	*Kathroperla*		1		1	2
			Suwallia					2
			not determined		1			
		Nemouridae	*Nemoura*					
			Ostrocerca					
			Podmosta					
			Zapada		1			
		Perlodidae	*Alloperla*					
			Isoperla					
			Perlomyia					
		not determined						
	Trichoptera	Brachycentridae	*Brachycentrus*					
		Limnephilidae	*Ecclosomyia*					
			not determined					2
		Glossosomatidae						
		Ryachophiliide	Ryachophilia	2	1		3	1
		not determined						
	Diptera	Chironomidae		261	289	172	221	189
		Empididae	*Chelifera*					
			Clinocera					
			Oreogeton					
		Psychodidae						
		Tabanidae						
		Tipulidae	*Tipula*					
			Dicranota	1	1			
			Rhabdomastix			1	16	3
			Hexatoma					
		Simuliidae	not determined	1	4	1	3	
		Ceratopogonidae			1			
	Coleoptera	Carabidae						
		Chrysomelidae						
		Curculionidae						
		Dytiscidae						
		Hydrophilidae						
		Hydroscaphidae						
		Staphylinidae						
Miscellaneous	Collembola	Entomobryidae						
		Neanuridae						
		Sminthuridae	*Sminthurus*					

Hess Samples from 2025: Number of invertebrates by family or genus (all life stages)								
Site:	**Kona Creek**							
Date:	August 2, 2025	Sampled by:	J. Brekken, B. Evers (ADF&G)					
	Taxon		Sample Net =	1	2	3	4	5
Misc. (cont.)	Collembola (cont.)	Poduridae						
		Isotomidae						1
	Lepidoptera	Pyralidae						
	Hymenoptera:Symphyta							
	Acari	Acarina			1			
	Oligochaeta				1		5	
	Ostracoda							
	Copepoda	Cyclopoida						
		Calanoida						
		Harpacticoida						
	Terrestrial Flies						1	
	Terrestrial Wasps							
	Misc. Terr. Arthropods							
	Nematoda							
	Platyhelminthes							
	Nematomorpha							
	Fish larvae	*Thymallus arcticus*						
		Salvelinus alpinus						
		Cottus cognatus						

APPENDIX C. ANALYTICAL LABORATORY REPORTS FOR WHOLE FISH, JOHNSON TRACT 2023

Wet Weight to Dry Weight Conversion Table – Fish Tissue

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-BM DV1	Upper Johnson	Arsenic, total (3050)	0.210	**0.854**		mg/kg	0.04	0.162601626	0.2	24.60
JR-BM DV1	Upper Johnson	Cadmium, total (3050)	0.122	**0.496**		mg/kg	0.01	0.040650407	0.05	24.60
JR-BM DV1	Upper Johnson	Copper, total (3050)	2.69	**10.935**		mg/kg	0.16	0.650406504	0.4	24.60
JR-BM DV1	Upper Johnson	Lead, total (3050)	0.0410	**0.167**	B	mg/kg	0.02	0.081300813	0.1	24.60
JR-BM DV1	Upper Johnson	Mercury by Direct Combustion AA	27.5	**111.789**	H	ng/g	3.15	12.80487805	15.75	24.60
JR-BM DV1	Upper Johnson	Selenium, total (3050)	0.941	**3.825**		mg/kg	0.02	0.081300813	0.05	24.60
JR-BM DV1	Upper Johnson	Silver, total (3050)		**0.081**	U	mg/kg	0.02	0.081300813	0.1	24.60
JR-BM DV1	Upper Johnson	Zinc, total (3050)	39.5	**160.569**		mg/kg	1.2	4.87804878	3	24.60
JR-BM DV10	Upper Johnson	Arsenic, total (3050)	0.208	**0.863**		mg/kg	0.028	0.116182573	0.14	24.10
JR-BM DV10	Upper Johnson	Cadmium, total (3050)	0.202	**0.838**		mg/kg	0.007	0.029045643	0.035	24.10
JR-BM DV10	Upper Johnson	Copper, total (3050)	1.26	**5.228**		mg/kg	0.112	0.46473029	0.28	24.10
JR-BM DV10	Upper Johnson	Lead, total (3050)	0.0157	**0.065**	B	mg/kg	0.014	0.058091286	0.07	24.10
JR-BM DV10	Upper Johnson	Mercury by Direct Combustion AA	25.9	**107.469**	H	ng/g	2.55	10.58091286	12.75	24.10
JR-BM DV10	Upper Johnson	Selenium, total (3050)	0.747	**3.100**		mg/kg	0.014	0.058091286	0.035	24.10
JR-BM DV10	Upper Johnson	Silver, total (3050)		**0.058**	U	mg/kg	0.014	0.058091286	0.07	24.10
JR-BM DV10	Upper Johnson	Zinc, total (3050)	37.8	**156.846**		mg/kg	0.84	3.485477178	2.1	24.10
JR-BM DV11	Upper Johnson	Arsenic, total (3050)	0.149	**0.668**	B	mg/kg	0.038	0.170403587	0.19	22.30
JR-BM DV11	Upper Johnson	Cadmium, total (3050)	0.0335	**0.150**	B	mg/kg	0.0095	0.042600897	0.0475	22.30
JR-BM DV11	Upper Johnson	Copper, total (3050)	1.78	**7.982**		mg/kg	0.152	0.68161435	0.38	22.30
JR-BM DV11	Upper Johnson	Lead, total (3050)		**0.085**	U	mg/kg	0.019	0.085201794	0.095	22.30
JR-BM DV11	Upper Johnson	Mercury by Direct Combustion AA	35	**156.951**	H	ng/g	3.1	13.90134529	15.5	22.30
JR-BM DV11	Upper Johnson	Selenium, total (3050)	0.664	**2.978**		mg/kg	0.019	0.085201794	0.0475	22.30
JR-BM DV11	Upper Johnson	Silver, total (3050)		**0.085**	U	mg/kg	0.019	0.085201794	0.095	22.30
JR-BM DV11	Upper Johnson	Zinc, total (3050)	24.8	**111.211**		mg/kg	1.14	5.112107623	2.85	22.30
JR-BM DV12	Upper Johnson	Arsenic, total (3050)	0.102	**0.440**	B	mg/kg	0.046	0.198275862	0.23	23.20
JR-BM DV12	Upper Johnson	Cadmium, total (3050)	0.0549	**0.237**	B	mg/kg	0.0115	0.049568966	0.0575	23.20
JR-BM DV12	Upper Johnson	Copper, total (3050)	1.42	**6.121**		mg/kg	0.184	0.793103448	0.46	23.20
JR-BM DV12	Upper Johnson	Lead, total (3050)	0.0234	**0.101**	B	mg/kg	0.023	0.099137931	0.115	23.20
JR-BM DV12	Upper Johnson	Mercury by Direct Combustion AA	26.4	**113.793**	H	ng/g	2.65	11.42241379	13.25	23.20
JR-BM DV12	Upper Johnson	Selenium, total (3050)	0.696	**3.000**		mg/kg	0.023	0.099137931	0.0575	23.20

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-BM DV12	Upper Johnson	Silver, total (3050)		**0.099**	U	mg/kg	0.023	0.099137931	0.115	23.20
JR-BM DV12	Upper Johnson	Zinc, total (3050)	37.2	**160.345**		mg/kg	1.38	5.948275862	3.45	23.20
JR-BM DV13	Upper Johnson	Arsenic, total (3050)	0.163	**0.731**	B	mg/kg	0.045	0.201793722	0.225	22.30
JR-BM DV13	Upper Johnson	Cadmium, total (3050)	0.0261	**0.117**	B	mg/kg	0.0113	0.050672646	0.0563	22.30
JR-BM DV13	Upper Johnson	Copper, total (3050)	1.30	**5.830**		mg/kg	0.18	0.807174888	0.45	22.30
JR-BM DV13	Upper Johnson	Lead, total (3050)		**0.101**	U	mg/kg	0.0225	0.100896861	0.113	22.30
JR-BM DV13	Upper Johnson	Mercury by Direct Combustion AA	20.3	**91.031**	H	ng/g	2.65	11.88340807	13.25	22.30
JR-BM DV13	Upper Johnson	Selenium, total (3050)	0.399	**1.789**		mg/kg	0.0225	0.100896861	0.0563	22.30
JR-BM DV13	Upper Johnson	Silver, total (3050)		**0.101**	U	mg/kg	0.0225	0.100896861	0.113	22.30
JR-BM DV13	Upper Johnson	Zinc, total (3050)	27.6	**123.767**		mg/kg	1.35	6.053811659	3.38	22.30
JR-BM DV14	Upper Johnson	Arsenic, total (3050)	0.162	**0.653**	B	mg/kg	0.044	0.177419355	0.22	24.80
JR-BM DV14	Upper Johnson	Cadmium, total (3050)	0.0315	**0.127**	B	mg/kg	0.011	0.044354839	0.055	24.80
JR-BM DV14	Upper Johnson	Copper, total (3050)	1.30	**5.242**		mg/kg	0.176	0.709677419	0.44	24.80
JR-BM DV14	Upper Johnson	Lead, total (3050)		**0.089**	U	mg/kg	0.022	0.088709677	0.11	24.80
JR-BM DV14	Upper Johnson	Mercury by Direct Combustion AA	17.2	**69.355**	H	ng/g	2.86	11.53225806	14.3	24.80
JR-BM DV14	Upper Johnson	Selenium, total (3050)	0.599	**2.415**		mg/kg	0.022	0.088709677	0.055	24.80
JR-BM DV14	Upper Johnson	Silver, total (3050)		**0.089**	U	mg/kg	0.022	0.088709677	0.11	24.80
JR-BM DV14	Upper Johnson	Zinc, total (3050)	33.1	**133.468**		mg/kg	1.32	5.322580645	3.3	24.80
JR-BM DV15	Upper Johnson	Arsenic, total (3050)	0.0960	**0.414**	B	mg/kg	0.037	0.159482759	0.185	23.20
JR-BM DV15	Upper Johnson	Cadmium, total (3050)		**0.000**	U	mg/kg	0.00925	0.03987069	0.0463	23.20
JR-BM DV15	Upper Johnson	Copper, total (3050)	1.18	**5.086**		mg/kg	0.148	0.637931034	0.37	23.20
JR-BM DV15	Upper Johnson	Lead, total (3050)		**0.080**	U	mg/kg	0.0185	0.079741379	0.0925	23.20
JR-BM DV15	Upper Johnson	Mercury by Direct Combustion AA	26.4	**113.793**	H	ng/g	3.28	14.13793103	16.4	23.20
JR-BM DV15	Upper Johnson	Selenium, total (3050)	1.08	**4.655**		mg/kg	0.0185	0.079741379	0.0463	23.20
JR-BM DV15	Upper Johnson	Silver, total (3050)		**0.080**	U	mg/kg	0.0185	0.079741379	0.0925	23.20
JR-BM DV15	Upper Johnson	Zinc, total (3050)	32.0	**137.931**		mg/kg	1.11	4.784482759	2.78	23.20
JR-BM DV16	Upper Johnson	Arsenic, total (3050)	0.109	**0.498**	B	mg/kg	0.028	0.127853881	0.14	21.90
JR-BM DV16	Upper Johnson	Cadmium, total (3050)	0.0309	**0.141**	B	mg/kg	0.007	0.03196347	0.035	21.90
JR-BM DV16	Upper Johnson	Copper, total (3050)	0.916	**4.183**		mg/kg	0.112	0.511415525	0.28	21.90
JR-BM DV16	Upper Johnson	Lead, total (3050)	0.0144	**0.066**	B	mg/kg	0.014	0.063926941	0.07	21.90
JR-BM DV16	Upper Johnson	Mercury by Direct Combustion AA	27.6	**126.027**	H	ng/g	2.67	12.19178082	13.35	21.90
JR-BM DV16	Upper Johnson	Selenium, total (3050)	0.700	**3.196**		mg/kg	0.014	0.063926941	0.035	21.90
JR-BM DV16	Upper Johnson	Silver, total (3050)		**0.064**	U	mg/kg	0.014	0.063926941	0.07	21.90
JR-BM DV16	Upper Johnson	Zinc, total (3050)	29.6	**135.160**		mg/kg	0.84	3.835616438	2.1	21.90
JR-BM DV2	Upper Johnson	Arsenic, total (3050)	0.109	**0.434**	B	mg/kg	0.027	0.107569721	0.135	25.10

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-BM DV2	Upper Johnson	Cadmium, total (3050)	0.253	**1.008**		mg/kg	0.00675	0.02689243	0.0338	25.10
JR-BM DV2	Upper Johnson	Copper, total (3050)	1.80	**7.171**		mg/kg	0.108	0.430278884	0.27	25.10
JR-BM DV2	Upper Johnson	Lead, total (3050)	0.0213	**0.085**	B	mg/kg	0.0135	0.053784861	0.0675	25.10
JR-BM DV2	Upper Johnson	Mercury by Direct Combustion AA	28.1	**111.952**	H	ng/g	2.76	10.99601594	13.8	25.10
JR-BM DV2	Upper Johnson	Selenium, total (3050)	0.680	**2.709**		mg/kg	0.0135	0.053784861	0.0338	25.10
JR-BM DV2	Upper Johnson	Silver, total (3050)		**0.054**	U	mg/kg	0.0135	0.053784861	0.0675	25.10
JR-BM DV2	Upper Johnson	Zinc, total (3050)	40.3	**160.558**		mg/kg	0.81	3.227091633	2.03	25.10
JR-BM DV3	Upper Johnson	Arsenic, total (3050)	0.0953	**0.429**	B	mg/kg	0.029	0.130630631	0.145	22.20
JR-BM DV3	Upper Johnson	Cadmium, total (3050)	0.0202	**0.091**	B	mg/kg	0.00725	0.032657658	0.0363	22.20
JR-BM DV3	Upper Johnson	Copper, total (3050)	1.48	**6.667**		mg/kg	0.116	0.522522523	0.29	22.20
JR-BM DV3	Upper Johnson	Lead, total (3050)	0.0152	**0.068**	B	mg/kg	0.0145	0.065315315	0.0725	22.20
JR-BM DV3	Upper Johnson	Mercury by Direct Combustion AA	15.5	**69.820**	H	ng/g	2.99	13.46846847	14.95	22.20
JR-BM DV3	Upper Johnson	Selenium, total (3050)	0.549	**2.473**		mg/kg	0.0145	0.065315315	0.0363	22.20
JR-BM DV3	Upper Johnson	Silver, total (3050)		**0.065**	U	mg/kg	0.0145	0.065315315	0.0725	22.20
JR-BM DV3	Upper Johnson	Zinc, total (3050)	27.3	**122.973**		mg/kg	0.87	3.918918919	2.18	22.20
JR-BM DV4	Upper Johnson	Arsenic, total (3050)	0.103	**0.419**	B	mg/kg	0.038	0.154471545	0.19	24.60
JR-BM DV4	Upper Johnson	Cadmium, total (3050)	0.0273	**0.111**	B	mg/kg	0.0095	0.038617886	0.0475	24.60
JR-BM DV4	Upper Johnson	Copper, total (3050)	1.45	**5.894**		mg/kg	0.152	0.617886179	0.38	24.60
JR-BM DV4	Upper Johnson	Lead, total (3050)	0.0243	**0.099**	B	mg/kg	0.019	0.077235772	0.095	24.60
JR-BM DV4	Upper Johnson	Mercury by Direct Combustion AA	20.8	**84.553**	H	ng/g	2.14	8.699186992	10.7	24.60
JR-BM DV4	Upper Johnson	Selenium, total (3050)	0.622	**2.528**		mg/kg	0.019	0.077235772	0.0475	24.60
JR-BM DV4	Upper Johnson	Silver, total (3050)		**0.077**	U	mg/kg	0.019	0.077235772	0.095	24.60
JR-BM DV4	Upper Johnson	Zinc, total (3050)	33.7	**136.992**		mg/kg	1.14	4.634146341	2.85	24.60
JR-BM DV5	Upper Johnson	Arsenic, total (3050)	0.117	**0.509**	B	mg/kg	0.033	0.143478261	0.165	23.00
JR-BM DV5	Upper Johnson	Cadmium, total (3050)	0.0776	**0.337**		mg/kg	0.00825	0.035869565	0.0413	23.00
JR-BM DV5	Upper Johnson	Copper, total (3050)	1.63	**7.087**		mg/kg	0.132	0.573913043	0.33	23.00
JR-BM DV5	Upper Johnson	Lead, total (3050)	0.0236	**0.103**	B	mg/kg	0.0165	0.07173913	0.0825	23.00
JR-BM DV5	Upper Johnson	Mercury by Direct Combustion AA	34.6	**150.435**	H	ng/g	3.01	13.08695652	15.05	23.00
JR-BM DV5	Upper Johnson	Selenium, total (3050)	0.725	**3.152**		mg/kg	0.0165	0.07173913	0.0413	23.00
JR-BM DV5	Upper Johnson	Silver, total (3050)		**0.072**	U	mg/kg	0.0165	0.07173913	0.0825	23.00
JR-BM DV5	Upper Johnson	Zinc, total (3050)	29.6	**128.696**		mg/kg	0.99	4.304347826	2.48	23.00
JR-BM DV6	Upper Johnson	Arsenic, total (3050)	0.134	**0.538**	B	mg/kg	0.035	0.140562249	0.175	24.90
JR-BM DV6	Upper Johnson	Cadmium, total (3050)	0.132	**0.530**		mg/kg	0.00875	0.035140562	0.0438	24.90
JR-BM DV6	Upper Johnson	Copper, total (3050)	1.87	**7.510**		mg/kg	0.14	0.562248996	0.35	24.90
JR-BM DV6	Upper Johnson	Lead, total (3050)	0.0216	**0.087**	B	mg/kg	0.0175	0.070281124	0.0875	24.90

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-BM DV6	Upper Johnson	Mercury by Direct Combustion AA	34.3	**137.751**	H	ng/g	2.31	9.277108434	11.55	24.90
JR-BM DV6	Upper Johnson	Selenium, total (3050)	0.604	**2.426**		mg/kg	0.0175	0.070281124	0.0438	24.90
JR-BM DV6	Upper Johnson	Silver, total (3050)		**0.070**	U	mg/kg	0.0175	0.070281124	0.0875	24.90
JR-BM DV6	Upper Johnson	Zinc, total (3050)	29.5	**118.474**		mg/kg	1.05	4.21686747	2.63	24.90
JR-BM DV7	Upper Johnson	Arsenic, total (3050)	0.0935	**0.421**	B	mg/kg	0.046	0.207207207	0.23	22.20
JR-BM DV7	Upper Johnson	Cadmium, total (3050)	0.0220	**0.099**	B	mg/kg	0.0115	0.051801802	0.0575	22.20
JR-BM DV7	Upper Johnson	Copper, total (3050)	2.22	**10.000**		mg/kg	0.184	0.828828829	0.46	22.20
JR-BM DV7	Upper Johnson	Lead, total (3050)		**0.104**	U	mg/kg	0.023	0.103603604	0.115	22.20
JR-BM DV7	Upper Johnson	Mercury by Direct Combustion AA	35.3	**159.009**	H	ng/g	3.1	13.96396396	15.5	22.20
JR-BM DV7	Upper Johnson	Selenium, total (3050)	0.660	**2.973**		mg/kg	0.023	0.103603604	0.0575	22.20
JR-BM DV7	Upper Johnson	Silver, total (3050)		**0.104**	U	mg/kg	0.023	0.103603604	0.115	22.20
JR-BM DV7	Upper Johnson	Zinc, total (3050)	30.3	**136.486**		mg/kg	1.38	6.216216216	3.45	22.20
JR-BM DV8	Upper Johnson	Arsenic, total (3050)	0.111	**0.481**	B	mg/kg	0.028	0.121212121	0.14	23.10
JR-BM DV8	Upper Johnson	Cadmium, total (3050)	0.0264	**0.114**	B	mg/kg	0.007	0.03030303	0.035	23.10
JR-BM DV8	Upper Johnson	Copper, total (3050)	1.70	**7.359**		mg/kg	0.112	0.484848485	0.28	23.10
JR-BM DV8	Upper Johnson	Lead, total (3050)	0.0172	**0.074**	B	mg/kg	0.014	0.060606061	0.07	23.10
JR-BM DV8	Upper Johnson	Mercury by Direct Combustion AA	22	**95.238**	H	ng/g	3.03	13.11688312	15.15	23.10
JR-BM DV8	Upper Johnson	Selenium, total (3050)	0.569	**2.463**		mg/kg	0.014	0.060606061	0.035	23.10
JR-BM DV8	Upper Johnson	Silver, total (3050)		**0.061**	U	mg/kg	0.014	0.060606061	0.07	23.10
JR-BM DV8	Upper Johnson	Zinc, total (3050)	26.8	**116.017**		mg/kg	0.84	3.636363636	2.1	23.10
JR-BM DV9	Upper Johnson	Arsenic, total (3050)	0.148	**0.643**	B	mg/kg	0.046	0.2	0.23	23.00
JR-BM DV9	Upper Johnson	Cadmium, total (3050)	0.0754	**0.328**		mg/kg	0.0115	0.05	0.0575	23.00
JR-BM DV9	Upper Johnson	Copper, total (3050)	1.85	**8.043**		mg/kg	0.184	0.8	0.46	23.00
JR-BM DV9	Upper Johnson	Lead, total (3050)		**0.100**	U	mg/kg	0.023	0.1	0.115	23.00
JR-BM DV9	Upper Johnson	Mercury by Direct Combustion AA	23.9	**103.913**	H	ng/g	2.94	12.7826087	14.7	23.00
JR-BM DV9	Upper Johnson	Selenium, total (3050)	0.599	**2.604**		mg/kg	0.023	0.1	0.0575	23.00
JR-BM DV9	Upper Johnson	Silver, total (3050)		**0.100**	U	mg/kg	0.023	0.1	0.115	23.00
JR-BM DV9	Upper Johnson	Zinc, total (3050)	34.4	**149.565**		mg/kg	1.38	6	3.45	23.00
KC-BM DV1	Kona Creek	Arsenic, total (3050)	0.0934	**0.374**	B	mg/kg	0.029	0.116	0.145	25.00
KC-BM DV1	Kona Creek	Cadmium, total (3050)	0.0258	**0.103**	B	mg/kg	0.00725	0.029	0.0363	25.00
KC-BM DV1	Kona Creek	Copper, total (3050)	1.30	**5.200**		mg/kg	0.116	0.464	0.29	25.00
KC-BM DV1	Kona Creek	Lead, total (3050)		**0.058**	U	mg/kg	0.0145	0.058	0.0725	25.00
KC-BM DV1	Kona Creek	Mercury by Direct Combustion AA	13.4	**53.600**	H	ng/g	2.67	10.68	13.35	25.00
KC-BM DV1	Kona Creek	Selenium, total (3050)	0.790	**3.160**		mg/kg	0.0145	0.058	0.0363	25.00
KC-BM DV1	Kona Creek	Silver, total (3050)		**0.058**	U	mg/kg	0.0145	0.058	0.0725	25.00

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-BM DV1	Kona Creek	Zinc, total (3050)	29.4	**117.600**		mg/kg	0.87	3.48	2.18	25.00
KC-BM DV10	Kona Creek	Arsenic, total (3050)	0.126	**0.508**	B	mg/kg	0.035	0.141129032	0.175	24.80
KC-BM DV10	Kona Creek	Cadmium, total (3050)	0.0423	**0.171**	B	mg/kg	0.00875	0.035282258	0.0438	24.80
KC-BM DV10	Kona Creek	Copper, total (3050)	1.07	**4.315**		mg/kg	0.14	0.564516129	0.35	24.80
KC-BM DV10	Kona Creek	Lead, total (3050)		**0.071**	U	mg/kg	0.0175	0.070564516	0.0875	24.80
KC-BM DV10	Kona Creek	Mercury by Direct Combustion AA	8.74	**35.242**	BH	ng/g	3.13	12.62096774	15.65	24.80
KC-BM DV10	Kona Creek	Selenium, total (3050)	0.857	**3.456**		mg/kg	0.0175	0.070564516	0.0438	24.80
KC-BM DV10	Kona Creek	Silver, total (3050)		**0.071**	U	mg/kg	0.0175	0.070564516	0.0875	24.80
KC-BM DV10	Kona Creek	Zinc, total (3050)	19.1	**77.016**		mg/kg	1.05	4.233870968	2.63	24.80
KC-BM DV11	Kona Creek	Arsenic, total (3050)	0.0842	**0.351**	B	mg/kg	0.031	0.129166667	0.155	24.00
KC-BM DV11	Kona Creek	Cadmium, total (3050)	0.0209	**0.087**	B	mg/kg	0.00775	0.032291667	0.0388	24.00
KC-BM DV11	Kona Creek	Copper, total (3050)	1.02	**4.250**		mg/kg	0.124	0.516666667	0.31	24.00
KC-BM DV11	Kona Creek	Lead, total (3050)		**0.065**	U	mg/kg	0.0155	0.064583333	0.0775	24.00
KC-BM DV11	Kona Creek	Mercury by Direct Combustion AA	14.2	**59.167**	BH	ng/g	2.96	12.33333333	14.8	24.00
KC-BM DV11	Kona Creek	Selenium, total (3050)	0.588	**2.450**		mg/kg	0.0155	0.064583333	0.0388	24.00
KC-BM DV11	Kona Creek	Silver, total (3050)		**0.065**	U	mg/kg	0.0155	0.064583333	0.0775	24.00
KC-BM DV11	Kona Creek	Zinc, total (3050)	32.5	**135.417**		mg/kg	0.93	3.875	2.33	24.00
KC-BM DV12	Kona Creek	Arsenic, total (3050)	0.109	**0.441**	B	mg/kg	0.029	0.117408907	0.145	24.70
KC-BM DV12	Kona Creek	Cadmium, total (3050)	0.0938	**0.380**		mg/kg	0.00725	0.029352227	0.0363	24.70
KC-BM DV12	Kona Creek	Copper, total (3050)	1.34	**5.425**		mg/kg	0.116	0.469635628	0.29	24.70
KC-BM DV12	Kona Creek	Lead, total (3050)		**0.059**	U	mg/kg	0.0145	0.058704453	0.0725	24.70
KC-BM DV12	Kona Creek	Mercury by Direct Combustion AA	10.4	**42.105**	BH	ng/g	3.28	13.27935223	16.4	24.70
KC-BM DV12	Kona Creek	Selenium, total (3050)	0.844	**3.417**		mg/kg	0.0145	0.058704453	0.0363	24.70
KC-BM DV12	Kona Creek	Silver, total (3050)		**0.059**	U	mg/kg	0.0145	0.058704453	0.0725	24.70
KC-BM DV12	Kona Creek	Zinc, total (3050)	27.8	**112.551**		mg/kg	0.87	3.522267206	2.18	24.70
KC-BM DV13	Kona Creek	Arsenic, total (3050)	0.0883	**0.355**	B	mg/kg	0.028	0.112449799	0.14	24.90
KC-BM DV13	Kona Creek	Cadmium, total (3050)	0.0266	**0.107**	B	mg/kg	0.007	0.02811245	0.035	24.90
KC-BM DV13	Kona Creek	Copper, total (3050)	1.12	**4.498**		mg/kg	0.112	0.449799197	0.28	24.90
KC-BM DV13	Kona Creek	Lead, total (3050)		**0.056**	U	mg/kg	0.014	0.0562249	0.07	24.90
KC-BM DV13	Kona Creek	Mercury by Direct Combustion AA	12.1	**48.594**	H	ng/g	2.35	9.437751004	11.75	24.90
KC-BM DV13	Kona Creek	Selenium, total (3050)	0.686	**2.755**		mg/kg	0.014	0.0562249	0.035	24.90
KC-BM DV13	Kona Creek	Silver, total (3050)		**0.056**	U	mg/kg	0.014	0.0562249	0.07	24.90
KC-BM DV13	Kona Creek	Zinc, total (3050)	23.8	**95.582**		mg/kg	0.84	3.373493976	2.1	24.90
KC-BM DV14	Kona Creek	Arsenic, total (3050)	0.0820	**0.323**	B	mg/Kg	0.029	0.114173228	0.145	25.40
KC-BM DV14	Kona Creek	Cadmium, total (3050)	0.0224	**0.088**	B	mg/Kg	0.00725	0.028543307	0.0363	25.40

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-BM DV14	Kona Creek	Copper, total (3050)	1.77	**6.969**		mg/kg	0.116	0.456692913	0.29	25.40
KC-BM DV14	Kona Creek	Lead, total (3050)		**0.057**	U	mg/kg	0.0145	0.057086614	0.0725	25.40
KC-BM DV14	Kona Creek	Mercury by Direct Combustion AA	6.69	**26.339**	BH	ng/g	2.86	11.25984252	14.3	25.40
KC-BM DV14	Kona Creek	Selenium, total (3050)	0.749	**2.949**		mg/kg	0.0145	0.057086614	0.0363	25.40
KC-BM DV14	Kona Creek	Silver, total (3050)		**0.057**	U	mg/kg	0.0145	0.057086614	0.0725	25.40
KC-BM DV14	Kona Creek	Zinc, total (3050)	25.8	**101.575**		mg/kg	0.87	3.42519685	2.18	25.40
KC-BM DV15	Kona Creek	Arsenic, total (3050)	0.0896	**0.396**	B	mg/kg	0.04	0.17699115	0.2	22.60
KC-BM DV15	Kona Creek	Cadmium, total (3050)	0.0484	**0.214**	B	mg/kg	0.01	0.044247788	0.05	22.60
KC-BM DV15	Kona Creek	Copper, total (3050)	1.12	**4.956**		mg/kg	0.16	0.707964602	0.4	22.60
KC-BM DV15	Kona Creek	Lead, total (3050)		**0.088**	U	mg/kg	0.02	0.088495575	0.1	22.60
KC-BM DV15	Kona Creek	Mercury by Direct Combustion AA	16.7	**73.894**	H	ng/g	2.76	12.21238938	13.8	22.60
KC-BM DV15	Kona Creek	Selenium, total (3050)	0.769	**3.403**		mg/kg	0.02	0.088495575	0.05	22.60
KC-BM DV15	Kona Creek	Silver, total (3050)		**0.088**	U	mg/kg	0.02	0.088495575	0.1	22.60
KC-BM DV15	Kona Creek	Zinc, total (3050)	35.4	**156.637**		mg/kg	1.2	5.309734513	3	22.60
KC-BM DV2	Kona Creek	Arsenic, total (3050)	0.0952	**0.423**	B	mg/kg	0.042	0.186666667	0.21	22.50
KC-BM DV2	Kona Creek	Cadmium, total (3050)	0.0152	**0.068**	B	mg/kg	0.0105	0.046666667	0.0525	22.50
KC-BM DV2	Kona Creek	Copper, total (3050)	1.39	**6.178**		mg/kg	0.168	0.746666667	0.42	22.50
KC-BM DV2	Kona Creek	Lead, total (3050)		**0.093**	U	mg/kg	0.021	0.093333333	0.105	22.50
KC-BM DV2	Kona Creek	Mercury by Direct Combustion AA	19.2	**85.333**	H	ng/g	2.27	10.08888889	11.35	22.50
KC-BM DV2	Kona Creek	Selenium, total (3050)	0.799	**3.551**		mg/kg	0.021	0.093333333	0.0525	22.50
KC-BM DV2	Kona Creek	Silver, total (3050)		**0.093**	U	mg/kg	0.021	0.093333333	0.105	22.50
KC-BM DV2	Kona Creek	Zinc, total (3050)	30.2	**134.222**		mg/kg	1.26	5.6	3.15	22.50
KC-BM DV3	Kona Creek	Arsenic, total (3050)	0.0807	**0.333**	B	mg/kg	0.026	0.107438017	0.13	24.20
KC-BM DV3	Kona Creek	Cadmium, total (3050)	0.0384	**0.159**		mg/kg	0.0065	0.026859504	0.0325	24.20
KC-BM DV3	Kona Creek	Copper, total (3050)	1.13	**4.669**		mg/kg	0.104	0.429752066	0.26	24.20
KC-BM DV3	Kona Creek	Lead, total (3050)		**0.054**	U	mg/kg	0.013	0.053719008	0.065	24.20
KC-BM DV3	Kona Creek	Mercury by Direct Combustion AA	22.6	**93.388**	H	ng/g	2.4	9.917355372	12	24.20
KC-BM DV3	Kona Creek	Selenium, total (3050)	0.873	**3.607**		mg/kg	0.013	0.053719008	0.0325	24.20
KC-BM DV3	Kona Creek	Silver, total (3050)		**0.054**	U	mg/kg	0.013	0.053719008	0.065	24.20
KC-BM DV3	Kona Creek	Zinc, total (3050)	30.2	**124.793**		mg/kg	0.78	3.223140496	1.95	24.20
KC-BM DV4	Kona Creek	Arsenic, total (3050)	0.0762	**0.323**	B	mg/kg	0.026	0.110169492	0.13	23.60
KC-BM DV4	Kona Creek	Cadmium, total (3050)	0.0360	**0.153**		mg/kg	0.0065	0.027542373	0.0325	23.60
KC-BM DV4	Kona Creek	Copper, total (3050)	1.13	**4.788**		mg/kg	0.104	0.440677966	0.26	23.60
KC-BM DV4	Kona Creek	Lead, total (3050)		**0.055**	U	mg/kg	0.013	0.055084746	0.065	23.60
KC-BM DV4	Kona Creek	Mercury by Direct Combustion AA	13.6	**57.627**	BH	ng/g	2.86	12.11864407	14.3	23.60

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-BM DV4	Kona Creek	Selenium, total (3050)	0.809	**3.428**		mg/kg	0.013	0.055084746	0.0325	23.60
KC-BM DV4	Kona Creek	Silver, total (3050)		**0.055**	U	mg/kg	0.013	0.055084746	0.065	23.60
KC-BM DV4	Kona Creek	Zinc, total (3050)	30.0	**127.119**		mg/kg	0.78	3.305084746	1.95	23.60
KC-BM DV5	Kona Creek	Arsenic, total (3050)	0.102	**0.436**	B	mg/kg	0.043	0.183760684	0.215	23.40
KC-BM DV5	Kona Creek	Cadmium, total (3050)	0.0648	**0.277**		mg/kg	0.0108	0.046153846	0.0538	23.40
KC-BM DV5	Kona Creek	Copper, total (3050)	1.45	**6.197**		mg/kg	0.172	0.735042735	0.43	23.40
KC-BM DV5	Kona Creek	Lead, total (3050)		**0.092**	U	mg/kg	0.0215	0.091880342	0.108	23.40
KC-BM DV5	Kona Creek	Mercury by Direct Combustion AA	12	**51.282**	BH	ng/g	2.65	11.32478632	13.25	23.40
KC-BM DV5	Kona Creek	Selenium, total (3050)	0.748	**3.197**		mg/kg	0.0215	0.091880342	0.0538	23.40
KC-BM DV5	Kona Creek	Silver, total (3050)		**0.092**	U	mg/kg	0.0215	0.091880342	0.108	23.40
KC-BM DV5	Kona Creek	Zinc, total (3050)	25.7	**109.829**		mg/kg	1.29	5.512820513	3.23	23.40
KC-BM DV6	Kona Creek	Arsenic, total (3050)	0.118	**0.502**	B	mg/kg	0.037	0.157446809	0.185	23.50
KC-BM DV6	Kona Creek	Cadmium, total (3050)	0.0776	**0.330**		mg/kg	0.00925	0.039361702	0.0463	23.50
KC-BM DV6	Kona Creek	Copper, total (3050)	1.45	**6.170**		mg/kg	0.148	0.629787234	0.37	23.50
KC-BM DV6	Kona Creek	Lead, total (3050)		**0.079**	U	mg/kg	0.0185	0.078723404	0.0925	23.50
KC-BM DV6	Kona Creek	Mercury by Direct Combustion AA	12.8	**54.468**	H	ng/g	2.37	10.08510638	11.85	23.50
KC-BM DV6	Kona Creek	Selenium, total (3050)	1.52	**6.468**		mg/kg	0.0185	0.078723404	0.0463	23.50
KC-BM DV6	Kona Creek	Silver, total (3050)		**0.079**	U	mg/kg	0.0185	0.078723404	0.0925	23.50
KC-BM DV6	Kona Creek	Zinc, total (3050)	30.3	**128.936**		mg/kg	1.11	4.723404255	2.78	23.50
KC-BM DV7	Kona Creek	Arsenic, total (3050)	0.104	**0.397**	B	mg/kg	0.029	0.110687023	0.145	26.20
KC-BM DV7	Kona Creek	Cadmium, total (3050)	0.0564	**0.215**		mg/kg	0.00725	0.027671756	0.0363	26.20
KC-BM DV7	Kona Creek	Copper, total (3050)	1.89	**7.214**		mg/kg	0.116	0.442748092	0.29	26.20
KC-BM DV7	Kona Creek	Lead, total (3050)		**0.055**	U	mg/kg	0.0145	0.055343511	0.0725	26.20
KC-BM DV7	Kona Creek	Mercury by Direct Combustion AA	24	**91.603**	H	ng/g	3.08	11.75572519	15.4	26.20
KC-BM DV7	Kona Creek	Selenium, total (3050)	0.991	**3.782**		mg/kg	0.0145	0.055343511	0.0363	26.20
KC-BM DV7	Kona Creek	Silver, total (3050)		**0.055**	U	mg/kg	0.0145	0.055343511	0.0725	26.20
KC-BM DV7	Kona Creek	Zinc, total (3050)	23.7	**90.458**		mg/kg	0.87	3.320610687	2.18	26.20
KC-BM DV8	Kona Creek	Arsenic, total (3050)	0.0766	**0.332**	B	mg/kg	0.027	0.116883117	0.135	23.10
KC-BM DV8	Kona Creek	Cadmium, total (3050)	0.0400	**0.173**		mg/ kg	0.00675	0.029220779	0.0338	23.10
KC-BM DV8	Kona Creek	Copper, total (3050)	1.11	**4.805**		mg/ kg	0.108	0.467532468	0.27	23.10
KC-BM DV8	Kona Creek	Lead, total (3050)		**0.058**	U	mg/ kg	0.0135	0.058441558	0.0675	23.10
KC-BM DV8	Kona Creek	Mercury by Direct Combustion AA	17.3	**74.892**	H	ng/g	2.6	11.25541126	13	23.10
KC-BM DV8	Kona Creek	Selenium, total (3050)	0.690	**2.987**		mg/ kg	0.0135	0.058441558	0.0338	23.10
KC-BM DV8	Kona Creek	Silver, total (3050)		**0.058**	U	mg/ kg	0.0135	0.058441558	0.0675	23.10
KC-BM DV8	Kona Creek	Zinc, total (3050)	30.2	**130.736**		mg/ kg	0.81	3.506493506	2.03	23.10

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-BM DV9	Kona Creek	Arsenic, total (3050)	0.0670	**0.299**	B	mg/ kg	0.033	0.147321429	0.165	22.40
KC-BM DV9	Kona Creek	Cadmium, total (3050)	0.0126	**0.056**	B	mg/ kg	0.00825	0.036830357	0.0413	22.40
KC-BM DV9	Kona Creek	Copper, total (3050)	1.27	**5.670**		mg/ kg	0.132	0.589285714	0.33	22.40
KC-BM DV9	Kona Creek	Lead, total (3050)		**0.074**	U	mg/ kg	0.0165	0.073660714	0.0825	22.40
KC-BM DV9	Kona Creek	Mercury by Direct Combustion AA	14.2	**63.393**	H	ng/g	2.76	12.32142857	13.8	22.40
KC-BM DV9	Kona Creek	Selenium, total (3050)	0.331	**1.478**		mg/ kg	0.0165	0.073660714	0.0413	22.40
KC-BM DV9	Kona Creek	Silver, total (3050)		**0.074**	U	mg/ kg	0.0165	0.073660714	0.0825	22.40
KC-BM DV9	Kona Creek	Zinc, total (3050)	29.0	**129.464**		mg/ kg	0.99	4.419642857	2.48	22.40

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was analyzed for but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

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Wet Weight to Dry Weight Conversion Table – Fish Tissue

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-1	Upper Johnson	Arsenic, total (3050)	0.0871	**0.411**	B	mg/ kg	0.029	0.137	0.145	21.2
JR-1	Upper Johnson	Cadmium, total (3050)	0.0625	**0.295**		mg/ kg	0.007	0.034	0.036	21.2
JR-1	Upper Johnson	Copper, total (3050)	1.28	**6.038**		mg/ kg	0.116	0.547	0.290	21.2
JR-1	Upper Johnson	Lead, total (3050)	0.0299	**0.141**	B	mg/ kg	0.015	0.068	0.073	21.2
JR-1	Upper Johnson	Mercury by Direct Combustion AA	24.2	**114.151**		ng/g	2.920	13.774	14.600	21.2
JR-1	Upper Johnson	Selenium, total (3050)	0.605	**2.854**		mg/ kg	0.015	0.068	0.036	21.2
JR-1	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.015	0.068	0.073	21.2
JR-1	Upper Johnson	Zinc, total (3050)	26.7	**125.943**		mg/ kg	0.870	4.104	2.180	21.2
JR-2	Upper Johnson	Arsenic, total (3050)	0.131	**0.582**	B	mg/ kg	0.046	0.204	0.230	22.5
JR-2	Upper Johnson	Cadmium, total (3050)	0.0584	**0.260**		mg/ kg	0.012	0.051	0.058	22.5
JR-2	Upper Johnson	Copper, total (3050)	1.46	**6.489**		mg/ kg	0.184	0.818	0.460	22.5
JR-2	Upper Johnson	Lead, total (3050)	0.0483	**0.215**	B	mg/ kg	0.023	0.102	0.115	22.5
JR-2	Upper Johnson	Mercury by Direct Combustion AA	28.1	**124.889**		ng/g	2.030	9.022	10.150	22.5
JR-2	Upper Johnson	Selenium, total (3050)	0.535	**2.378**		mg/ kg	0.023	0.102	0.058	22.5
JR-2	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.023	0.102	0.115	22.5
JR-2	Upper Johnson	Zinc, total (3050)	35.5	**157.778**		mg/ kg	1.380	6.133	3.450	22.5
JR-3	Upper Johnson	Arsenic, total (3050)	0.110	**0.453**	B	mg/ kg	0.044	0.181	0.220	24.3
JR-3	Upper Johnson	Cadmium, total (3050)	0.0502	**0.207**	B	mg/ kg	0.011	0.045	0.055	24.3
JR-3	Upper Johnson	Copper, total (3050)	1.35	**5.556**		mg/ kg	0.176	0.724	0.440	24.3
JR-3	Upper Johnson	Lead, total (3050)	0.0416	**0.171**	B	mg/ kg	0.022	0.091	0.110	24.3
JR-3	Upper Johnson	Mercury by Direct Combustion AA	24.5	**100.823**		ng/g	3.740	15.391	18.700	24.3
JR-3	Upper Johnson	Selenium, total (3050)	0.637	**2.621**		mg/ kg	0.022	0.091	0.055	24.3
JR-3	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.022	0.091	0.110	24.3
JR-3	Upper Johnson	Zinc, total (3050)	39.5	**162.551**		mg/ kg	1.320	5.432	3.300	22.9
JR-4	Upper Johnson	Arsenic, total (3050)	0.139	**0.607**	B	mg/ kg	0.039	0.170	0.195	22.9
JR-4	Upper Johnson	Cadmium, total (3050)	0.0677	**0.296**		mg/ kg	0.010	0.043	0.049	22.9
JR-4	Upper Johnson	Copper, total (3050)	1.20	**5.240**		mg/ kg	0.156	0.681	0.390	22.9
JR-4	Upper Johnson	Lead, total (3050)	0.0197	**0.086**	B	mg/ kg	0.020	0.085	0.098	22.9
JR-4	Upper Johnson	Mercury by Direct Combustion AA	16.2	**70.742**		ng/g	2.990	13.057	14.950	22.9
JR-4	Upper Johnson	Selenium, total (3050)	0.681	**2.974**		mg/ kg	0.020	0.085	0.049	22.9
JR-4	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.020	0.085	0.098	25.5
JR-4	Upper Johnson	Zinc, total (3050)	32.7	**142.795**		mg/ kg	1.170	5.109	2.930	25.5

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-5	Upper Johnson	Arsenic, total (3050)	0.109	**0.427**	B	mg/ kg	0.045	0.176	0.225	25.5
JR-5	Upper Johnson	Cadmium, total (3050)	0.0605	**0.237**		mg/ kg	0.011	0.044	0.056	25.5
JR-5	Upper Johnson	Copper, total (3050)	1.000	**3.922**		mg/ kg	0.180	0.706	0.450	25.5
JR-5	Upper Johnson	Lead, total (3050)		**0.000**	U	mg/ kg	0.023	0.088	0.113	25.5
JR-5	Upper Johnson	Mercury by Direct Combustion AA	14.7	**57.647**	B	ng/g	3.420	13.412	17.100	25.5
JR-5	Upper Johnson	Selenium, total (3050)	0.681	**2.671**		mg/ kg	0.023	0.088	0.056	24.4
JR-5	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.023	0.088	0.113	24.4
JR-5	Upper Johnson	Zinc, total (3050)	30.1	**118.039**		mg/ kg	1.350	5.294	3.380	24.4
JR-6	Upper Johnson	Arsenic, total (3050)	0.107	**0.439**	B	mg/ kg	0.050	0.205	0.250	24.4
JR-6	Upper Johnson	Cadmium, total (3050)	0.0525	**0.215**	B	mg/ kg	0.013	0.051	0.063	24.4
JR-6	Upper Johnson	Copper, total (3050)	2.21	**9.057**		mg/ kg	0.200	0.820	0.500	24.4
JR-6	Upper Johnson	Lead, total (3050)	0.0338	**0.139**	B	mg/ kg	0.025	0.102	0.125	24.4
JR-6	Upper Johnson	Mercury by Direct Combustion AA	30	**122.951**		ng/g	3.960	16.230	19.800	21.7
JR-6	Upper Johnson	Selenium, total (3050)	0.601	**2.463**		mg/ kg	0.025	0.102	0.063	21.7
JR-6	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.025	0.102	0.125	21.7
JR-6	Upper Johnson	Zinc, total (3050)	39.5	**161.885**		mg/ kg	1.500	6.148	3.750	21.7
JR-7	Upper Johnson	Arsenic, total (3050)	0.0963	**0.444**	B	mg/ kg	0.042	0.194	0.210	21.7
JR-7	Upper Johnson	Cadmium, total (3050)	0.0278	**0.128**	B	mg/ kg	0.011	0.048	0.053	21.7
JR-7	Upper Johnson	Copper, total (3050)	0.879	**4.051**		mg/ kg	0.168	0.774	0.420	21.7
JR-7	Upper Johnson	Lead, total (3050)		**0.000**	U	mg/ kg	0.021	0.097	0.105	21.2
JR-7	Upper Johnson	Mercury by Direct Combustion AA	30.1	**138.710**		ng/g	2.520	11.613	12.600	21.2
JR-7	Upper Johnson	Selenium, total (3050)	0.672	**3.097**		mg/ kg	0.021	0.097	0.053	21.2
JR-7	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.021	0.097	0.105	21.2
JR-7	Upper Johnson	Zinc, total (3050)	30.8	**141.935**		mg/ kg	1.260	5.806	3.150	21.2
JR-8	Upper Johnson	Arsenic, total (3050)	0.0722	**0.301**	B	mg/ kg	0.049	0.204	0.245	24.0
JR-8	Upper Johnson	Cadmium, total (3050)	0.0149	**0.062**	B	mg/ kg	0.012	0.051	0.061	24.0
JR-8	Upper Johnson	Copper, total (3050)	1.07	**4.458**		mg/ kg	0.196	0.817	0.490	24.0
JR-8	Upper Johnson	Lead, total (3050)	0.0281	**0.117**	B	mg/ kg	0.025	0.102	0.123	24.0
JR-8	Upper Johnson	Mercury by Direct Combustion AA	31.4	**130.833**		ng/g	3.010	12.542	15.050	24.0
JR-8	Upper Johnson	Selenium, total (3050)	0.677	**2.821**		mg/ kg	0.025	0.102	0.061	24.0
JR-8	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.025	0.102	0.123	24.0
JR-8	Upper Johnson	Zinc, total (3050)	38.1	**158.750**		mg/ kg	1.470	6.125	3.680	24.0
JR-9	Upper Johnson	Arsenic, total (3050)	0.216	**0.973**	B	mg/ kg	0.047	0.212	0.235	22.2
JR-9	Upper Johnson	Cadmium, total (3050)	0.141	**0.635**		mg/ kg	0.012	0.053	0.059	22.2
JR-9	Upper Johnson	Copper, total (3050)	1.20	**5.405**		mg/ kg	0.188	0.847	0.470	22.2

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-9	Upper Johnson	Lead, total (3050)	0.0387	**0.174**	B	mg/ kg	0.024	0.106	0.118	22.2
JR-9	Upper Johnson	Mercury by Direct Combustion AA	15.8	**71.171**	B	ng/g	3.480	15.676	17.400	22.2
JR-9	Upper Johnson	Selenium, total (3050)	0.623	**2.806**		mg/ kg	0.024	0.106	0.059	22.2
JR-9	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.024	0.106	0.118	22.2
JR-9	Upper Johnson	Zinc, total (3050)	84.9	**382.432**		mg/ kg	1.410	6.351	3.530	22.2
JR-10	Upper Johnson	Arsenic, total (3050)	0.142	**0.645**	B	mg/ kg	0.046	0.209	0.230	22.0
JR-10	Upper Johnson	Cadmium, total (3050)	0.0899	**0.409**		mg/ kg	0.012	0.052	0.058	22.0
JR-10	Upper Johnson	Copper, total (3050)	1.26	**5.727**		mg/ kg	0.184	0.836	0.460	22.0
JR-10	Upper Johnson	Lead, total (3050)	0.0710	**0.323**	B	mg/ kg	0.023	0.105	0.115	22.0
JR-10	Upper Johnson	Mercury by Direct Combustion AA	15.2	**69.091**		ng/g	2.650	12.045	13.250	22.0
JR-10	Upper Johnson	Selenium, total (3050)	0.841	**3.823**		mg/ kg	0.023	0.105	0.058	22.0
JR-10	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.023	0.105	0.115	22.0
JR-10	Upper Johnson	Zinc, total (3050)	32.4	**147.273**		mg/ kg	1.380	6.273	3.450	22.0
JR-11	Upper Johnson	Arsenic, total (3050)	0.126	**0.565**	B	mg/ kg	0.033	0.148	0.165	22.3
JR-11	Upper Johnson	Cadmium, total (3050)	0.0658	**0.295**		mg/ kg	0.008	0.037	0.041	22.3
JR-11	Upper Johnson	Copper, total (3050)	0.928	**4.161**		mg/ kg	0.132	0.592	0.330	22.3
JR-11	Upper Johnson	Lead, total (3050)	0.0199	**0.089**	B	mg/ kg	0.017	0.074	0.083	22.3
JR-11	Upper Johnson	Mercury by Direct Combustion AA	13.3	**59.641**	B	ng/g	2.840	12.735	14.200	22.3
JR-11	Upper Johnson	Selenium, total (3050)	0.616	**2.762**		mg/ kg	0.017	0.074	0.041	22.3
JR-11	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.017	0.074	0.083	22.3
JR-11	Upper Johnson	Zinc, total (3050)	50.3	**225.561**		mg/ kg	0.990	4.439	2.480	22.3
JR-12	Upper Johnson	Arsenic, total (3050)	0.116	**0.545**	B	mg/ kg	0.033	0.155	0.165	21.3
JR-12	Upper Johnson	Cadmium, total (3050)	0.0783	**0.368**		mg/ kg	0.008	0.039	0.041	21.3
JR-12	Upper Johnson	Copper, total (3050)	1.08	**5.070**		mg/ kg	0.132	0.620	0.330	21.3
JR-12	Upper Johnson	Lead, total (3050)	0.0176	**0.083**	B	mg/ kg	0.017	0.077	0.083	21.3
JR-12	Upper Johnson	Mercury by Direct Combustion AA	11.4	**53.521**	B	ng/g	3.280	15.399	16.400	21.3
JR-12	Upper Johnson	Selenium, total (3050)	0.573	**2.690**		mg/ kg	0.017	0.077	0.041	21.3
JR-12	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.017	0.077	0.083	21.3
JR-12	Upper Johnson	Zinc, total (3050)	36.6	**171.831**		mg/ kg	0.990	4.648	2.480	21.3
JR-13	Upper Johnson	Arsenic, total (3050)	0.146	**0.716**	B	mg/ kg	0.050	0.245	0.250	20.4
JR-13	Upper Johnson	Cadmium, total (3050)	0.117	**0.574**		mg/ kg	0.013	0.061	0.063	20.4
JR-13	Upper Johnson	Copper, total (3050)	1.69	**8.284**		mg/ kg	0.200	0.980	0.500	20.4
JR-13	Upper Johnson	Lead, total (3050)	0.0290	**0.142**	B	mg/ kg	0.025	0.123	0.125	20.4
JR-13	Upper Johnson	Mercury by Direct Combustion AA	13.1	**64.216**	B	ng/g	3.030	14.853	15.150	20.4
JR-13	Upper Johnson	Selenium, total (3050)	0.946	**4.637**		mg/ kg	0.025	0.123	0.063	20.4

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-13	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.025	0.123	0.125	20.4
JR-13	Upper Johnson	Zinc, total (3050)	38.8	**190.196**		mg/ kg	1.500	7.353	3.750	20.4
JR-14	Upper Johnson	Arsenic, total (3050)	0.0914	**0.372**	B	mg/ kg	0.043	0.175	0.215	24.6
JR-14	Upper Johnson	Cadmium, total (3050)	0.207	**0.841**		mg/ kg	0.011	0.044	0.054	24.6
JR-14	Upper Johnson	Copper, total (3050)	1.14	**4.634**		mg/ kg	0.172	0.699	0.430	24.6
JR-14	Upper Johnson	Lead, total (3050)		**0.000**	U	mg/ kg	0.022	0.087	0.108	24.6
JR-14	Upper Johnson	Mercury by Direct Combustion AA	15.1	**61.382**	B	ng/g	3.310	13.455	16.550	24.6
JR-14	Upper Johnson	Selenium, total (3050)	0.612	**2.488**		mg/ kg	0.022	0.087	0.054	24.6
JR-14	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.022	0.087	0.108	24.6
JR-14	Upper Johnson	Zinc, total (3050)	21.8	**88.618**		mg/ kg	1.290	5.244	3.230	24.6
JR-15	Upper Johnson	Arsenic, total (3050)	0.0684	**0.259**	B	mg/ kg	0.035	0.133	0.175	26.4
JR-15	Upper Johnson	Cadmium, total (3050)	0.0409	**0.155**	B	mg/ kg	0.009	0.033	0.044	26.4
JR-15	Upper Johnson	Copper, total (3050)	0.780	**2.955**		mg/ kg	0.140	0.530	0.350	26.4
JR-15	Upper Johnson	Lead, total (3050)		**0.000**	U	mg/ kg	0.018	0.066	0.088	26.4
JR-15	Upper Johnson	Mercury by Direct Combustion AA	20.3	**76.894**		ng/g	3.640	13.788	18.200	26.4
JR-15	Upper Johnson	Selenium, total (3050)	0.640	**2.424**		mg/ kg	0.018	0.066	0.044	26.4
JR-15	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/ kg	0.018	0.066	0.088	26.4
JR-15	Upper Johnson	Zinc, total (3050)	21.1	**79.924**		mg/ kg	1.050	3.977	2.630	26.4
KC-1	Kona Creek	Arsenic, total (3050)	0.172	**0.729**	B	mg/ kg	0.044	0.186	0.220	23.6
KC-1	Kona Creek	Cadmium, total (3050)	0.161	**0.682**		mg/ kg	0.011	0.047	0.055	23.6
KC-1	Kona Creek	Copper, total (3050)	1.76	**7.458**		mg/ kg	0.176	0.746	0.440	23.6
KC-1	Kona Creek	Lead, total (3050)	0.0885	**0.375**	B	mg/ kg	0.022	0.093	0.110	23.6
KC-1	Kona Creek	Mercury by Direct Combustion AA	15.6	**66.102**		ng/g	2.350	9.958	11.750	23.6
KC-1	Kona Creek	Selenium, total (3050)	0.775	**3.284**		mg/ kg	0.022	0.093	0.055	23.6
KC-1	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.022	0.093	0.110	23.6
KC-1	Kona Creek	Zinc, total (3050)	42.9	**181.780**		mg/ kg	1.320	5.593	3.300	23.6
KC-2	Kona Creek	Arsenic, total (3050)	0.121	**0.540**	B	mg/ kg	0.042	0.188	0.210	22.4
KC-2	Kona Creek	Cadmium, total (3050)	0.0935	**0.417**		mg/ kg	0.011	0.047	0.053	22.4
KC-2	Kona Creek	Copper, total (3050)	1.78	**7.946**		mg/ kg	0.168	0.750	0.420	22.4
KC-2	Kona Creek	Lead, total (3050)	0.0394	**0.176**	B	mg/ kg	0.021	0.094	0.105	22.4
KC-2	Kona Creek	Mercury by Direct Combustion AA	13.8	**61.607**	B	ng/g	3.480	15.536	17.400	22.4
KC-2	Kona Creek	Selenium, total (3050)	0.726	**3.241**		mg/ kg	0.021	0.094	0.053	22.4
KC-2	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.021	0.094	0.105	22.4
KC-2	Kona Creek	Zinc, total (3050)	28.7	**128.125**		mg/ kg	1.260	5.625	3.150	22.4
KC-3	Kona Creek	Arsenic, total (3050)	0.0422	**0.184**	B	mg/ kg	0.040	0.175	0.200	22.9

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-3	Kona Creek	Cadmium, total (3050)	0.0328	**0.143**	B	mg/ kg	0.010	0.044	0.050	22.9
KC-3	Kona Creek	Copper, total (3050)	0.652	**2.847**		mg/ kg	0.160	0.699	0.400	22.9
KC-3	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.020	0.087	0.100	22.9
KC-3	Kona Creek	Mercury by Direct Combustion AA	14.8	**64.629**	B	ng/g	3.080	13.450	15.400	22.9
KC-3	Kona Creek	Selenium, total (3050)	0.616	**2.690**		mg/ kg	0.020	0.087	0.050	22.9
KC-3	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.020	0.087	0.100	22.9
KC-3	Kona Creek	Zinc, total (3050)	22.6	**98.690**		mg/ kg	1.200	5.240	3.000	22.9
KC-4	Kona Creek	Arsenic, total (3050)	0.0479	**0.230**	B	mg/ kg	0.044	0.212	0.220	20.8
KC-4	Kona Creek	Cadmium, total (3050)	0.0393	**0.189**	B	mg/ kg	0.011	0.053	0.055	20.8
KC-4	Kona Creek	Copper, total (3050)	0.638	**3.067**		mg/ kg	0.176	0.846	0.440	20.8
KC-4	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.022	0.106	0.110	20.8
KC-4	Kona Creek	Mercury by Direct Combustion AA	12	**57.692**	B	ng/g	3.130	15.048	15.650	20.8
KC-4	Kona Creek	Selenium, total (3050)	0.589	**2.832**		mg/ kg	0.022	0.106	0.055	20.8
KC-4	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.022	0.106	0.110	20.8
KC-4	Kona Creek	Zinc, total (3050)	36.8	**176.923**		mg/ kg	1.320	6.346	3.300	20.8
KC-5	Kona Creek	Arsenic, total (3050)	0.0525	**0.240**	B	mg/ kg	0.032	0.146	0.160	21.9
KC-5	Kona Creek	Cadmium, total (3050)	0.0451	**0.206**		mg/ kg	0.008	0.037	0.040	21.9
KC-5	Kona Creek	Copper, total (3050)	0.587	**2.680**		mg/ kg	0.128	0.584	0.320	21.9
KC-5	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.016	0.073	0.080	21.9
KC-5	Kona Creek	Mercury by Direct Combustion AA	13.8	**63.014**		ng/g	2.550	11.644	12.750	21.9
KC-5	Kona Creek	Selenium, total (3050)	0.468	**2.137**		mg/ kg	0.016	0.073	0.040	21.9
KC-5	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.016	0.073	0.080	21.9
KC-5	Kona Creek	Zinc, total (3050)	25.9	**118.265**		mg/ kg	0.960	4.384	2.400	21.9
KC-6	Kona Creek	Arsenic, total (3050)	0.0472	**0.212**	B	mg/ kg	0.038	0.170	0.190	22.3
KC-6	Kona Creek	Cadmium, total (3050)	0.0420	**0.188**	B	mg/ kg	0.010	0.043	0.048	22.3
KC-6	Kona Creek	Copper, total (3050)	0.814	**3.650**		mg/ kg	0.152	0.682	0.380	22.3
KC-6	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.019	0.085	0.095	22.3
KC-6	Kona Creek	Mercury by Direct Combustion AA	18.6	**83.408**		ng/g	3.050	13.677	15.250	22.3
KC-6	Kona Creek	Selenium, total (3050)	0.527	**2.363**		mg/ kg	0.019	0.085	0.048	22.3
KC-6	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.019	0.085	0.095	22.3
KC-6	Kona Creek	Zinc, total (3050)	36.1	**161.883**		mg/ kg	1.140	5.112	2.850	22.3
KC-7	Kona Creek	Arsenic, total (3050)		**0.000**	U	mg/ kg	0.044	0.195	0.220	22.6
KC-7	Kona Creek	Cadmium, total (3050)	0.0456	**0.202**	B	mg/ kg	0.011	0.049	0.055	22.6
KC-7	Kona Creek	Copper, total (3050)	1.08	**4.779**		mg/ kg	0.176	0.779	0.440	22.6
KC-7	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.022	0.097	0.110	22.6

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-7	Kona Creek	Mercury by Direct Combustion AA	16.6	**73.451**		ng/g	3.200	14.159	16.000	22.6
KC-7	Kona Creek	Selenium, total (3050)	0.472	**2.088**		mg/ kg	0.022	0.097	0.055	22.6
KC-7	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.022	0.097	0.110	22.6
KC-7	Kona Creek	Zinc, total (3050)	30.7	**135.841**		mg/ kg	1.320	5.841	3.300	22.6
KC-8	Kona Creek	Arsenic, total (3050)	0.0707	**0.320**	B	mg/ kg	0.046	0.208	0.230	22.1
KC-8	Kona Creek	Cadmium, total (3050)	0.0126	**0.057**	B	mg/ kg	0.012	0.052	0.058	22.1
KC-8	Kona Creek	Copper, total (3050)	0.522	**2.362**		mg/ kg	0.184	0.833	0.460	22.1
KC-8	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.023	0.104	0.115	22.1
KC-8	Kona Creek	Mercury by Direct Combustion AA	12.6	**57.014**	B	ng/g	2.550	11.538	12.750	22.1
KC-8	Kona Creek	Selenium, total (3050)	0.567	**2.566**		mg/ kg	0.023	0.104	0.058	22.1
KC-8	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.023	0.104	0.115	22.1
KC-8	Kona Creek	Zinc, total (3050)	31.1	**140.724**		mg/ kg	1.380	6.244	3.450	22.1
KC-9	Kona Creek	Arsenic, total (3050)	0.0511	**0.216**	B	mg/ kg	0.038	0.160	0.190	23.7
KC-9	Kona Creek	Cadmium, total (3050)	0.0288	**0.122**	B	mg/ kg	0.010	0.040	0.048	23.7
KC-9	Kona Creek	Copper, total (3050)	0.746	**3.148**		mg/ kg	0.152	0.641	0.380	23.7
KC-9	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.019	0.080	0.095	23.7
KC-9	Kona Creek	Mercury by Direct Combustion AA	10.4	**43.882**	B	ng/g	2.740	11.561	13.700	23.7
KC-9	Kona Creek	Selenium, total (3050)	0.543	**2.291**		mg/ kg	0.019	0.080	0.048	23.7
KC-9	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.019	0.080	0.095	23.7
KC-9	Kona Creek	Zinc, total (3050)	24.9	**105.063**		mg/ kg	1.140	4.810	2.850	23.7
KC-10	Kona Creek	Arsenic, total (3050)	0.0670	**0.284**	B	mg/ kg	0.036	0.153	0.180	23.6
KC-10	Kona Creek	Cadmium, total (3050)	0.0455	**0.193**		mg/ kg	0.009	0.038	0.045	23.6
KC-10	Kona Creek	Copper, total (3050)	0.874	**3.703**		mg/ kg	0.144	0.610	0.360	23.6
KC-10	Kona Creek	Lead, total (3050)		**0.000**	U	mg/ kg	0.018	0.076	0.090	23.6
KC-10	Kona Creek	Mercury by Direct Combustion AA	17.9	**75.847**		ng/g	2.630	11.144	13.150	23.6
KC-10	Kona Creek	Selenium, total (3050)	0.594	**2.517**		mg/ kg	0.018	0.076	0.045	23.6
KC-10	Kona Creek	Silver, total (3050)		**0.000**	U	mg/ kg	0.018	0.076	0.090	23.6
KC-10	Kona Creek	Zinc, total (3050)	26.7	**113.136**		mg/ kg	1.080	4.576	2.700	23.6

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was anlyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

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Wet Weight to Dry Weight Conversion Table – Fish Tissue

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-1	Upper Johnson	Arsenic, total (3050)	0.0525	**0.204**	B	mg/ kg	0.05	0.195	0.25	25.7
JR-1	Upper Johnson	Cadmium, total (3050)			U	mg/ kg	0.0125	0.049	0.0625	25.7
JR-1	Upper Johnson	Copper, total (3050)	0.912	**3.549**		mg/ kg	0.2	0.778	0.5	25.7
JR-1	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.025	0.097	0.125	25.7
JR-1	Upper Johnson	Mercury by Direct Combustion AA	15.2	**59.144**		ng/g	2.41	9.377	12.05	25.7
JR-1	Upper Johnson	Selenium, total (3050)	0.942	**3.665**		mg/ kg	0.025	0.097	0.0625	25.7
JR-1	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.025	0.097	0.125	25.7
JR-1	Upper Johnson	Zinc, total (3050)	24.2	**94.163**		mg/ kg	1.5	5.837	3.75	25.7
JR-2	Upper Johnson	Arsenic, total (3050)	0.152	**0.569**	B	mg/ kg	0.039	0.146	0.195	26.7
JR-2	Upper Johnson	Cadmium, total (3050)	0.0741	**0.278**		mg/ kg	0.00975	0.037	0.0488	26.7
JR-2	Upper Johnson	Copper, total (3050)	0.912	**3.416**		mg/ kg	0.156	0.584	0.39	26.7
JR-2	Upper Johnson	Lead, total (3050)	0.0199	**0.075**	B	mg/ kg	0.0195	0.073	0.0975	26.7
JR-2	Upper Johnson	Mercury by Direct Combustion AA	54.7	**204.869**		ng/g	2.86	10.712	14.3	26.7
JR-2	Upper Johnson	Selenium, total (3050)	1.03	**3.858**		mg/ kg	0.0195	0.073	0.0488	26.7
JR-2	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0195	0.073	0.0975	26.7
JR-2	Upper Johnson	Zinc, total (3050)	32.0	**119.850**		mg/ kg	1.17	4.382	2.93	26.7
JR-3	Upper Johnson	Arsenic, total (3050)	0.0853	**0.383**	B	mg/ kg	0.04	0.179	0.2	22.3
JR-3	Upper Johnson	Cadmium, total (3050)	0.0233	**0.104**	B	mg/ kg	0.01	0.045	0.05	22.3
JR-3	Upper Johnson	Copper, total (3050)	1.03	**4.619**		mg/ kg	0.16	0.717	0.4	22.3
JR-3	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.02	0.090	0.1	22.3
JR-3	Upper Johnson	Mercury by Direct Combustion AA	67.4	**302.242**		ng/g	2.21	9.910	11.05	22.3
JR-3	Upper Johnson	Selenium, total (3050)	0.829	**3.717**		mg/ kg	0.02	0.090	0.05	22.3
JR-3	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.02	0.090	0.1	22.3
JR-3	Upper Johnson	Zinc, total (3050)	36.5	**163.677**		mg/ kg	1.2	5.381	3	22.3
JR-4	Upper Johnson	Arsenic, total (3050)	0.144	**0.603**	B	mg/ kg	0.038	0.159	0.19	23.9
JR-4	Upper Johnson	Cadmium, total (3050)	0.0301	**0.126**	B	mg/ kg	0.0095	0.040	0.0475	23.9
JR-4	Upper Johnson	Copper, total (3050)	1.27	**5.314**		mg/ kg	0.152	0.636	0.38	23.9
JR-4	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.019	0.079	0.095	23.9
JR-4	Upper Johnson	Mercury by Direct Combustion AA	18.8	**78.661**		ng/g	2.09	8.745	10.45	23.9
JR-4	Upper Johnson	Selenium, total (3050)	1.07	**4.477**		mg/ kg	0.019	0.079	0.0475	23.9
JR-4	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.019	0.079	0.095	23.9
JR-4	Upper Johnson	Zinc, total (3050)	31.3	**130.962**		mg/ kg	1.14	4.770	2.85	23.9

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-5	Upper Johnson	Arsenic, total (3050)	0.0941	**0.381**	B	mg/ kg	0.026	0.105	0.13	24.7
JR-5	Upper Johnson	Cadmium, total (3050)	0.0327	**0.132**		mg/ kg	0.0065	0.026	0.0325	24.7
JR-5	Upper Johnson	Copper, total (3050)	0.796	**3.223**		mg/ kg	0.104	0.421	0.26	24.7
JR-5	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.013	0.053	0.065	24.7
JR-5	Upper Johnson	Mercury by Direct Combustion AA	17.4	**70.445**		ng/g	2.3	9.312	11.5	24.7
JR-5	Upper Johnson	Selenium, total (3050)	0.799	**3.235**		mg/ kg	0.013	0.053	0.0325	24.7
JR-5	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.013	0.053	0.065	24.7
JR-5	Upper Johnson	Zinc, total (3050)	27.8	**112.551**		mg/ kg	0.78	3.158	1.95	24.7
JR-6	Upper Johnson	Arsenic, total (3050)	0.196	**0.875**		mg/ kg	0.029	0.129	0.145	22.4
JR-6	Upper Johnson	Cadmium, total (3050)	0.209	**0.933**		mg/ kg	0.00725	0.032	0.0363	22.4
JR-6	Upper Johnson	Copper, total (3050)	1.72	**7.679**		mg/ kg	0.116	0.518	0.29	22.4
JR-6	Upper Johnson	Lead, total (3050)	0.0228	**0.102**	B	mg/ kg	0.0145	0.065	0.0725	22.4
JR-6	Upper Johnson	Mercury by Direct Combustion AA	22.1	**98.661**		ng/g	2.37	10.580	11.85	22.4
JR-6	Upper Johnson	Selenium, total (3050)	1.07	**4.777**		mg/ kg	0.0145	0.065	0.0363	22.4
JR-6	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0145	0.065	0.0725	22.4
JR-6	Upper Johnson	Zinc, total (3050)	43.0	**191.964**		mg/ kg	0.87	3.884	2.18	22.4
JR-7	Upper Johnson	Arsenic, total (3050)	0.167	**0.635**		mg/ kg	0.029	0.110	0.145	26.3
JR-7	Upper Johnson	Cadmium, total (3050)	0.123	**0.468**		mg/ kg	0.00725	0.028	0.0363	26.3
JR-7	Upper Johnson	Copper, total (3050)	1.51	**5.741**		mg/ kg	0.116	0.441	0.29	26.3
JR-7	Upper Johnson	Lead, total (3050)	0.0181	**0.069**	B	mg/ kg	0.0145	0.055	0.0725	26.3
JR-7	Upper Johnson	Mercury by Direct Combustion AA	20.4	**77.567**		ng/g	1.67	6.350	8.35	26.3
JR-7	Upper Johnson	Selenium, total (3050)	0.989	**3.760**		mg/ kg	0.0145	0.055	0.0363	26.3
JR-7	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0145	0.055	0.0725	26.3
JR-7	Upper Johnson	Zinc, total (3050)	31.7	**120.532**		mg/ kg	0.87	3.308	2.18	26.3
JR-8	Upper Johnson	Arsenic, total (3050)	0.197	**0.749**		mg/ kg	0.033	0.125	0.165	26.3
JR-8	Upper Johnson	Cadmium, total (3050)	0.0345	**0.131**	B	mg/ kg	0.00825	0.031	0.0413	26.3
JR-8	Upper Johnson	Copper, total (3050)	1.18	**4.487**		mg/ kg	0.132	0.502	0.33	26.3
JR-8	Upper Johnson	Lead, total (3050)	0.0542	**0.206**	B	mg/ kg	0.0165	0.063	0.0825	26.3
JR-8	Upper Johnson	Mercury by Direct Combustion AA	60.4	**229.658**		ng/g	2.31	8.783	11.55	26.3
JR-8	Upper Johnson	Selenium, total (3050)	0.777	**2.954**		mg/ kg	0.0165	0.063	0.0413	26.3
JR-8	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0165	0.063	0.0825	26.3
JR-8	Upper Johnson	Zinc, total (3050)	22.1	**84.030**		mg/ kg	0.99	3.764	2.48	26.3
JR-9	Upper Johnson	Arsenic, total (3050)	0.0456	**0.202**	B	mg/ kg	0.034	0.150	0.17	22.6
JR-9	Upper Johnson	Cadmium, total (3050)	0.114	**0.504**		mg/ kg	0.0085	0.038	0.0425	22.6
JR-9	Upper Johnson	Copper, total (3050)	0.916	4.053		mg/ kg	0.136	0.602	0.34	22.6

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-9	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.017	0.075	0.085	22.6
JR-9	Upper Johnson	Mercury by Direct Combustion AA	35.1	**155.310**		ng/g	3.01	13.319	15.05	22.6
JR-9	Upper Johnson	Selenium, total (3050)	0.499	**2.208**		mg/ kg	0.017	0.075	0.0425	22.6
JR-9	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.017	0.075	0.085	22.6
JR-9	Upper Johnson	Zinc, total (3050)	18.6	**82.301**		mg/ kg	1.02	4.513	2.55	22.6
JR-10	Upper Johnson	Arsenic, total (3050)	0.134	**0.549**	B	mg/ kg	0.027	0.111	0.135	24.4
JR-10	Upper Johnson	Cadmium, total (3050)	0.0829	**0.340**		mg/ kg	0.00675	0.028	0.0338	24.4
JR-10	Upper Johnson	Copper, total (3050)	1.10	**4.508**		mg/ kg	0.108	0.443	0.27	24.4
JR-10	Upper Johnson	Lead, total (3050)	0.0271	**0.111**	B	mg/ kg	0.0135	0.055	0.0675	24.4
JR-10	Upper Johnson	Mercury by Direct Combustion AA	29.2	**119.672**		ng/g	2.68	10.984	13.4	24.4
JR-10	Upper Johnson	Selenium, total (3050)	0.863	**3.537**		mg/ kg	0.0135	0.055	0.0338	24.4
JR-10	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0135	0.055	0.0675	24.4
JR-10	Upper Johnson	Zinc, total (3050)	29.6	**121.311**		mg/ kg	0.81	3.320	2.03	24.4
JR-11	Upper Johnson	Arsenic, total (3050)	0.0684	**0.307**	B	mg/ kg	0.029	0.130	0.145	22.3
JR-11	Upper Johnson	Cadmium, total (3050)	0.0251	**0.113**	B	mg/ kg	0.00725	0.033	0.0363	22.3
JR-11	Upper Johnson	Copper, total (3050)	0.646	**2.897**		mg/ kg	0.116	0.520	0.29	22.3
JR-11	Upper Johnson	Lead, total (3050)			U	mg/ kg	0.0145	0.065	0.0725	22.3
JR-11	Upper Johnson	Mercury by Direct Combustion AA	20.9	**93.722**		ng/g	2.33	10.448	11.65	22.3
JR-11	Upper Johnson	Selenium, total (3050)	0.628	**2.816**		mg/ kg	0.0145	0.065	0.0363	22.3
JR-11	Upper Johnson	Silver, total (3050)			U	mg/ kg	0.0145	0.065	0.0725	22.3
JR-11	Upper Johnson	Zinc, total (3050)	23.7	**106.278**		mg/ kg	0.87	3.901	2.18	22.3
KC-1	Kona Creek	Arsenic, total (3050)	0.102	**0.442**	B	mg/ kg	0.028	0.121	0.14	23.1
KC-1	Kona Creek	Cadmium, total (3050)	0.0496	**0.215**		mg/ kg	0.007	0.030	0.035	23.1
KC-1	Kona Creek	Copper, total (3050)	1.17	**5.065**		mg/ kg	0.112	0.485	0.28	23.1
KC-1	Kona Creek	Lead, total (3050)	0.0146	**0.063**	B	mg/ kg	0.014	0.061	0.07	23.1
KC-1	Kona Creek	Mercury by Direct Combustion AA	15.3	**66.234**		ng/g	1.71	7.403	8.55	23.1
KC-1	Kona Creek	Selenium, total (3050)	0.693	**3.000**		mg/ kg	0.014	0.061	0.035	23.1
KC-1	Kona Creek	Silver, total (3050)			U	mg/ kg	0.014	0.061	0.07	23.1
KC-1	Kona Creek	Zinc, total (3050)	41.0	**177.489**		mg/ kg	0.84	3.636	2.1	23.1
KC-2	Kona Creek	Arsenic, total (3050)	0.0791	**0.375**	B	mg/ kg	0.029	0.137	0.145	21.1
KC-2	Kona Creek	Cadmium, total (3050)	0.0384	**0.182**		mg/ kg	0.00725	0.034	0.0363	21.1
KC-2	Kona Creek	Copper, total (3050)	1.19	**5.640**		mg/ kg	0.116	0.550	0.29	21.1
KC-2	Kona Creek	Lead, total (3050)			U	mg/ kg	0.0145	0.069	0.0725	21.1
KC-2	Kona Creek	Mercury by Direct Combustion AA	26.4	**125.118**		ng/g	2.26	10.711	11.3	21.1
KC-2	Kona Creek	Selenium, total (3050)	0.777	**3.682**		mg/ kg	0.0145	0.069	0.0363	21.1

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-2	Kona Creek	Silver, total (3050)			U	mg/ kg	0.0145	0.069	0.0725	21.1
KC-2	Kona Creek	Zinc, total (3050)	21.6	**102.370**		mg/ kg	0.87	4.123	2.18	21.1
KC-3	Kona Creek	Arsenic, total (3050)	0.107	**0.484**	B	mg/ kg	0.029	0.131	0.145	22.1
KC-3	Kona Creek	Cadmium, total (3050)	0.0550	**0.249**		mg/ kg	0.00725	0.033	0.0363	22.1
KC-3	Kona Creek	Copper, total (3050)	1.12	**5.068**		mg/ kg	0.116	0.525	0.29	22.1
KC-3	Kona Creek	Lead, total (3050)	0.0264	**0.119**	B	mg/ kg	0.0145	0.066	0.0725	22.1
KC-3	Kona Creek	Mercury by Direct Combustion AA	12	**54.299**		ng/g	1.5	6.787	7.5	22.1
KC-3	Kona Creek	Selenium, total (3050)	0.696	**3.149**		mg/ kg	0.0145	0.066	0.0363	22.1
KC-3	Kona Creek	Silver, total (3050)			U	mg/ kg	0.0145	0.066	0.0725	22.1
KC-3	Kona Creek	Zinc, total (3050)	35.9	**162.443**		mg/ kg	0.87	3.937	2.18	22.1
KC-4	Kona Creek	Arsenic, total (3050)	0.138	**0.556**		mg/ kg	0.026	0.105	0.13	24.8
KC-4	Kona Creek	Cadmium, total (3050)	0.0658	**0.265**		mg/ kg	0.0065	0.026	0.0325	24.8
KC-4	Kona Creek	Copper, total (3050)	0.875	**3.528**		mg/ kg	0.104	0.419	0.26	24.8
KC-4	Kona Creek	Lead, total (3050)			U	mg/ kg	0.013	0.052	0.065	24.8
KC-4	Kona Creek	Mercury by Direct Combustion AA	13.9	**56.048**		ng/g	1.97	7.944	9.85	24.8
KC-4	Kona Creek	Selenium, total (3050)	1.28	**5.161**		mg/ kg	0.013	0.052	0.0325	24.8
KC-4	Kona Creek	Silver, total (3050)			U	mg/ kg	0.013	0.052	0.065	24.8
KC-4	Kona Creek	Zinc, total (3050)	32.5	**131.048**		mg/ kg	0.78	3.145	1.95	24.8
KC-5	Kona Creek	Arsenic, total (3050)	0.0703	**0.314**	B	mg/ kg	0.029	0.129	0.145	22.4
KC-5	Kona Creek	Cadmium, total (3050)	0.0394	**0.176**		mg/ kg	0.00725	0.032	0.0363	22.4
KC-5	Kona Creek	Copper, total (3050)	0.840	**3.750**		mg/ kg	0.116	0.518	0.29	22.4
KC-5	Kona Creek	Lead, total (3050)			U	mg/ kg	0.0145	0.065	0.0725	22.4
KC-5	Kona Creek	Mercury by Direct Combustion AA	12.6	**56.250**		ng/g	2.23	9.955	11.15	22.4
KC-5	Kona Creek	Selenium, total (3050)	0.539	**2.406**		mg/ kg	0.0145	0.065	0.0363	22.4
KC-5	Kona Creek	Silver, total (3050)			U	mg/ kg	0.0145	0.065	0.0725	22.4
KC-5	Kona Creek	Zinc, total (3050)	23.7	**105.804**		mg/ kg	0.87	3.884	2.18	22.4
KC-6	Kona Creek	Arsenic, total (3050)	0.0977	**0.454**	B	mg/ kg	0.027	0.126	0.135	21.5
KC-6	Kona Creek	Cadmium, total (3050)	0.138	**0.642**		mg/ kg	0.00675	0.031	0.0338	21.5
KC-6	Kona Creek	Copper, total (3050)	1.25	**5.814**		mg/ kg	0.108	0.502	0.27	21.5
KC-6	Kona Creek	Lead, total (3050)	0.0144	**0.067**	B	mg/ kg	0.0135	0.063	0.0675	21.5
KC-6	Kona Creek	Mercury by Direct Combustion AA	18.2	**84.651**		ng/g	2.47	11.488	12.35	21.5
KC-6	Kona Creek	Selenium, total (3050)	0.820	**3.814**		mg/ kg	0.0135	0.063	0.0338	21.5
KC-6	Kona Creek	Silver, total (3050)			U	mg/ kg	0.0135	0.063	0.0675	21.5
KC-6	Kona Creek	Zinc, total (3050)	26.7	**124.186**		mg/ kg	0.81	3.767	2.03	21.5
KC-7	Kona Creek	Arsenic, total (3050)	0.144	**0.578**		mg/ kg	0.026	0.104	0.13	24.9

CLIENTID	Sample Site	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KC-7	Kona Creek	Cadmium, total (3050)	0.131	**0.526**		mg/ kg	0.0065	0.026	0.0325	24.9
KC-7	Kona Creek	Copper, total (3050)	1.08	**4.337**		mg/ kg	0.104	0.418	0.26	24.9
KC-7	Kona Creek	Lead, total (3050)			U	mg/ kg	0.013	0.052	0.065	24.9
KC-7	Kona Creek	Mercury by Direct Combustion AA	20	**80.321**		ng/g	2.52	10.120	12.6	24.9
KC-7	Kona Creek	Selenium, total (3050)	1.35	**5.422**		mg/ kg	0.013	0.052	0.0325	24.9
KC-7	Kona Creek	Silver, total (3050)			U	mg/ kg	0.013	0.052	0.065	24.9
KC-7	Kona Creek	Zinc, total (3050)	35.7	**143.373**		mg/ kg	0.78	3.133	1.95	24.9
KC-8	Kona Creek	Arsenic, total (3050)	0.142	**0.607**		mg/ kg	0.026	0.111	0.13	23.4
KC-8	Kona Creek	Cadmium, total (3050)	0.0866	**0.370**		mg/ kg	0.0065	0.028	0.0325	23.4
KC-8	Kona Creek	Copper, total (3050)	0.973	**4.158**		mg/ kg	0.104	0.444	0.26	23.4
KC-8	Kona Creek	Lead, total (3050)			U	mg/ kg	0.013	0.056	0.065	23.4
KC-8	Kona Creek	Mercury by Direct Combustion AA	17.3	**73.932**	B	ng/g	3.81	16.282	19.05	23.4
KC-8	Kona Creek	Selenium, total (3050)	0.998	**4.265**		mg/ kg	0.013	0.056	0.0325	23.4
KC-8	Kona Creek	Silver, total (3050)			U	mg/ kg	0.013	0.056	0.065	23.4
KC-8	Kona Creek	Zinc, total (3050)	28.9	**123.504**		mg/ kg	0.78	3.333	1.95	23.4

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was anlyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

September 26, 2025

Report to:
Ron Benkert
Alaska Dept of Fish and Game
333 Rasberry Rd.

Anchorage, AK 99518

cc: Allegra Cairns

Bill to:
Allegra Cairns
HighGold Mining Inc.
375 Water Street
Suite 405
Vancouver, BC V6B 5C6

Project ID:
ACZ Project ID: L96629

Ron Benkert:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 14, 2025. This project has been assigned to ACZ's project number, L96629. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L96629. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after October 26, 2025. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

ACZ **Laboratories, Inc.**
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 1

ACZ Sample ID: ***L96629-01***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	250	0.0525	B		mg/Kg	0.05	0.25	09/25/25 16:40	jrj
Cadmium, total (3050)	EPA 6020B	250	<0.0125	U		mg/Kg	0.0125	0.0625	09/25/25 16:40	jrj
Copper, total (3050)	EPA 6020B	250	0.912			mg/Kg	0.2	0.5	09/25/25 16:40	jrj
Lead, total (3050)	EPA 6020B	250	<0.025	U		mg/Kg	0.025	0.125	09/25/25 16:40	jrj
Mercury by Direct Combustion AA	EPA 7473	1	15.2		*	ng/g	2.41	12.05	08/26/25 16:34	rjw
Selenium, total (3050)	EPA 6020B	250	0.942		*	mg/Kg	0.025	0.0625	09/25/25 16:40	jrj
Silver, total (3050)	EPA 6020B	250	<0.025	U	*	mg/Kg	0.025	0.125	09/25/25 16:40	jrj
Zinc, total (3050)	EPA 6020B	250	24.2		*	mg/Kg	1.5	3.75	09/25/25 16:40	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	74.3		*	%	0.1	0.5	09/19/25 12:24	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 11:22	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:30	jsa

ACZ **Laboratories, Inc.**
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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 2

ACZ Sample ID: ***L96629-02***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	195	0.152	B		mg/Kg	0.039	0.195	09/25/25 16:49	jrj
Cadmium, total (3050)	EPA 6020B	195	0.0741			mg/Kg	0.00975	0.0488	09/25/25 16:49	jrj
Copper, total (3050)	EPA 6020B	195	0.912		*	mg/Kg	0.156	0.39	09/25/25 16:49	jrj
Lead, total (3050)	EPA 6020B	195	0.0199	B		mg/Kg	0.0195	0.0975	09/25/25 16:49	jrj
Mercury by Direct Combustion AA	EPA 7473	1	54.7		*	ng/g	2.86	14.3	08/26/25 16:50	rjw
Selenium, total (3050)	EPA 6020B	195	1.03		*	mg/Kg	0.0195	0.0488	09/25/25 16:49	jrj
Silver, total (3050)	EPA 6020B	195	<0.0195	U	*	mg/Kg	0.0195	0.0975	09/25/25 16:49	jrj
Zinc, total (3050)	EPA 6020B	195	32.0		*	mg/Kg	1.17	2.93	09/25/25 16:49	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	73.3		*	%	0.1	0.5	09/19/25 19:44	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 12:11	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:00	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 3

ACZ Sample ID: ***L96629-03***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	200	0.0853	B		mg/Kg	0.04	0.2	09/25/25 16:51	jrj
Cadmium, total (3050)	EPA 6020B	200	0.0233	B		mg/Kg	0.01	0.05	09/25/25 16:51	jrj
Copper, total (3050)	EPA 6020B	200	1.03		*	mg/Kg	0.16	0.4	09/25/25 16:51	jrj
Lead, total (3050)	EPA 6020B	200	<0.02	U		mg/Kg	0.02	0.1	09/25/25 16:51	jrj
Mercury by Direct Combustion AA	EPA 7473	1	67.4		*	ng/g	2.21	11.05	08/26/25 17:06	rjw
Selenium, total (3050)	EPA 6020B	200	0.829		*	mg/Kg	0.02	0.05	09/25/25 16:51	jrj
Silver, total (3050)	EPA 6020B	200	<0.02	U	*	mg/Kg	0.02	0.1	09/25/25 16:51	jrj
Zinc, total (3050)	EPA 6020B	200	36.5		*	mg/Kg	1.2	3	09/25/25 16:51	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.7		*	%	0.1	0.5	09/19/25 23:24	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 12:27	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:30	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 4

ACZ Sample ID: ***L96629-04***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	190	0.144	B		mg/Kg	0.038	0.19	09/25/25 16:53	jrj
Cadmium, total (3050)	EPA 6020B	190	0.0301	B		mg/Kg	0.0095	0.0475	09/25/25 16:53	jrj
Copper, total (3050)	EPA 6020B	190	1.27		*	mg/Kg	0.152	0.38	09/25/25 16:53	jrj
Lead, total (3050)	EPA 6020B	190	<0.019	U		mg/Kg	0.019	0.095	09/25/25 16:53	jrj
Mercury by Direct Combustion AA	EPA 7473	1	18.8		*	ng/g	2.09	10.45	08/26/25 17:14	rjw
Selenium, total (3050)	EPA 6020B	190	1.07		*	mg/Kg	0.019	0.0475	09/25/25 16:53	jrj
Silver, total (3050)	EPA 6020B	190	<0.019	U	*	mg/Kg	0.019	0.095	09/25/25 16:53	jrj
Zinc, total (3050)	EPA 6020B	190	31.3		*	mg/Kg	1.14	2.85	09/25/25 16:53	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	76.1		*	%	0.1	0.5	09/20/25 3:03	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 12:44	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 9:00	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 5

ACZ Sample ID: ***L96629-05***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	130	0.0941	B		mg/Kg	0.026	0.13	09/25/25 16:55	jrj
Cadmium, total (3050)	EPA 6020B	130	0.0327			mg/Kg	0.0065	0.0325	09/25/25 16:55	jrj
Copper, total (3050)	EPA 6020B	130	0.796		*	mg/Kg	0.104	0.26	09/25/25 16:55	jrj
Lead, total (3050)	EPA 6020B	130	<0.013	U		mg/Kg	0.013	0.065	09/25/25 16:55	jrj
Mercury by Direct Combustion AA	EPA 7473	1	17.4		*	ng/g	2.3	11.5	08/26/25 17:22	rjw
Selenium, total (3050)	EPA 6020B	130	0.799		*	mg/Kg	0.013	0.0325	09/25/25 16:55	jrj
Silver, total (3050)	EPA 6020B	130	<0.013	U	*	mg/Kg	0.013	0.065	09/25/25 16:55	jrj
Zinc, total (3050)	EPA 6020B	130	27.8		*	mg/Kg	0.78	1.95	09/25/25 16:55	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	75.3		*	%	0.1	0.5	09/20/25 6:43	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 13:00	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:30	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 6

ACZ Sample ID: ***L96629-06***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.196			mg/Kg	0.029	0.145	09/25/25 16:57	jrj
Cadmium, total (3050)	EPA 6020B	145	0.209			mg/Kg	0.00725	0.0363	09/25/25 16:57	jrj
Copper, total (3050)	EPA 6020B	145	1.72		*	mg/Kg	0.116	0.29	09/25/25 16:57	jrj
Lead, total (3050)	EPA 6020B	145	0.0228	B		mg/Kg	0.0145	0.0725	09/25/25 16:57	jrj
Mercury by Direct Combustion AA	EPA 7473	1	22.1		*	ng/g	2.37	11.85	08/26/25 17:37	rjw
Selenium, total (3050)	EPA 6020B	145	1.07		*	mg/Kg	0.0145	0.0363	09/25/25 16:57	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 16:57	jrj
Zinc, total (3050)	EPA 6020B	145	43.0		*	mg/Kg	0.87	2.18	09/25/25 16:57	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.6		*	%	0.1	0.5	09/20/25 10:23	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 13:17	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:36	jsa

ACZ **Laboratories, Inc.**
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 7

ACZ Sample ID: ***L96629-07***
Date Sampled: *08/03/25 09:40*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.167			mg/Kg	0.029	0.145	09/25/25 16:59	jrj
Cadmium, total (3050)	EPA 6020B	145	0.123			mg/Kg	0.00725	0.0363	09/25/25 16:59	jrj
Copper, total (3050)	EPA 6020B	145	1.51		*	mg/Kg	0.116	0.29	09/25/25 16:59	jrj
Lead, total (3050)	EPA 6020B	145	0.0181	B		mg/Kg	0.0145	0.0725	09/25/25 16:59	jrj
Mercury by Direct Combustion AA	EPA 7473	1	20.4		*	ng/g	1.67	8.35	08/26/25 17:45	rjw
Selenium, total (3050)	EPA 6020B	145	0.989		*	mg/Kg	0.0145	0.0363	09/25/25 16:59	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 16:59	jrj
Zinc, total (3050)	EPA 6020B	145	31.7		*	mg/Kg	0.87	2.18	09/25/25 16:59	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	73.7		*	%	0.1	0.5	09/20/25 14:03	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 13:33	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:43	jsa

ACZ **Laboratories, Inc.**
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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: KONA CREEK 1

ACZ Sample ID: ***L96629-08***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	140	0.102	B		mg/Kg	0.028	0.14	09/25/25 17:00	jrj
Cadmium, total (3050)	EPA 6020B	140	0.0496			mg/Kg	0.007	0.035	09/25/25 17:00	jrj
Copper, total (3050)	EPA 6020B	140	1.17		*	mg/Kg	0.112	0.28	09/25/25 17:00	jrj
Lead, total (3050)	EPA 6020B	140	0.0146	B		mg/Kg	0.014	0.07	09/25/25 17:00	jrj
Mercury by Direct Combustion AA	EPA 7473	1	15.3		*	ng/g	1.71	8.55	08/26/25 17:54	rjw
Selenium, total (3050)	EPA 6020B	140	0.693		*	mg/Kg	0.014	0.035	09/25/25 17:00	jrj
Silver, total (3050)	EPA 6020B	140	<0.014	U	*	mg/Kg	0.014	0.07	09/25/25 17:00	jrj
Zinc, total (3050)	EPA 6020B	140	41.0		*	mg/Kg	0.84	2.1	09/25/25 17:00	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	76.9		*	%	0.1	0.5	09/20/25 17:42	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 13:49	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:50	jsa

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: KONA CREEK 2

ACZ Sample ID: ***L96629-09***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.0791	B		mg/Kg	0.029	0.145	09/25/25 17:02	jrj
Cadmium, total (3050)	EPA 6020B	145	0.0384			mg/Kg	0.00725	0.0363	09/25/25 17:02	jrj
Copper, total (3050)	EPA 6020B	145	1.19		*	mg/Kg	0.116	0.29	09/25/25 17:02	jrj
Lead, total (3050)	EPA 6020B	145	<0.0145	U		mg/Kg	0.0145	0.0725	09/25/25 17:02	jrj
Mercury by Direct Combustion AA	EPA 7473	1	26.4		*	ng/g	2.26	11.3	08/26/25 18:02	rjw
Selenium, total (3050)	EPA 6020B	145	0.777		*	mg/Kg	0.0145	0.0363	09/25/25 17:02	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 17:02	jrj
Zinc, total (3050)	EPA 6020B	145	21.6		*	mg/Kg	0.87	2.18	09/25/25 17:02	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	78.9		*	%	0.1	0.5	09/20/25 21:22	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 14:06	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 7:57	jsa

Cantango Ore
Project ID:
Sample ID: KONA CREEK 3

ACZ Sample ID: ***L96629-10***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.107	B		mg/Kg	0.029	0.145	09/25/25 17:04	jrj
Cadmium, total (3050)	EPA 6020B	145	0.0550			mg/Kg	0.00725	0.0363	09/25/25 17:04	jrj
Copper, total (3050)	EPA 6020B	145	1.12		*	mg/Kg	0.116	0.29	09/25/25 17:04	jrj
Lead, total (3050)	EPA 6020B	145	0.0264	B		mg/Kg	0.0145	0.0725	09/25/25 17:04	jrj
Mercury by Direct Combustion AA	EPA 7473	1	12		*	ng/g	1.5	7.5	08/26/25 18:10	rjw
Selenium, total (3050)	EPA 6020B	145	0.696		*	mg/Kg	0.0145	0.0363	09/25/25 17:04	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 17:04	jrj
Zinc, total (3050)	EPA 6020B	145	35.9		*	mg/Kg	0.87	2.18	09/25/25 17:04	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.9		*	%	0.1	0.5	09/21/25 1:02	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 14:22	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:03	jsa

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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: KONA CREEK 4

ACZ Sample ID: ***L96629-11***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	130	0.138			mg/Kg	0.026	0.13	09/25/25 17:06	jrj
Cadmium, total (3050)	EPA 6020B	130	0.0658			mg/Kg	0.0065	0.0325	09/25/25 17:06	jrj
Copper, total (3050)	EPA 6020B	130	0.875		*	mg/Kg	0.104	0.26	09/25/25 17:06	jrj
Lead, total (3050)	EPA 6020B	130	<0.013	U		mg/Kg	0.013	0.065	09/25/25 17:06	jrj
Mercury by Direct Combustion AA	EPA 7473	1	13.9		*	ng/g	1.97	9.85	08/26/25 18:18	rjw
Selenium, total (3050)	EPA 6020B	130	1.28		*	mg/Kg	0.013	0.0325	09/25/25 17:06	jrj
Silver, total (3050)	EPA 6020B	130	<0.013	U	*	mg/Kg	0.013	0.065	09/25/25 17:06	jrj
Zinc, total (3050)	EPA 6020B	130	32.5		*	mg/Kg	0.78	1.95	09/25/25 17:06	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	75.2		*	%	0.1	0.5	09/21/25 4:42	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 14:38	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:10	jsa

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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: KONA CREEK 5

ACZ Sample ID: ***L96629-12***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.0703	B		mg/Kg	0.029	0.145	09/25/25 17:12	jrj
Cadmium, total (3050)	EPA 6020B	145	0.0394			mg/Kg	0.00725	0.0363	09/25/25 17:12	jrj
Copper, total (3050)	EPA 6020B	145	0.840		*	mg/Kg	0.116	0.29	09/25/25 17:12	jrj
Lead, total (3050)	EPA 6020B	145	<0.0145	U		mg/Kg	0.0145	0.0725	09/25/25 17:12	jrj
Mercury by Direct Combustion AA	EPA 7473	1	12.6		*	ng/g	2.23	11.15	08/26/25 18:26	rjw
Selenium, total (3050)	EPA 6020B	145	0.539		*	mg/Kg	0.0145	0.0363	09/25/25 17:12	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 17:12	jrj
Zinc, total (3050)	EPA 6020B	145	23.7		*	mg/Kg	0.87	2.18	09/25/25 17:12	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.6		*	%	0.1	0.5	09/21/25 8:21	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 14:55	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:17	jsa

Cantango Ore
Project ID:
Sample ID: KONA CREEK 6

ACZ Sample ID: ***L96629-13***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	135	0.0977	B		mg/Kg	0.027	0.135	09/25/25 17:13	jrj
Cadmium, total (3050)	EPA 6020B	135	0.138			mg/Kg	0.00675	0.0338	09/25/25 17:13	jrj
Copper, total (3050)	EPA 6020B	135	1.25		*	mg/Kg	0.108	0.27	09/25/25 17:13	jrj
Lead, total (3050)	EPA 6020B	135	0.0144	B		mg/Kg	0.0135	0.0675	09/25/25 17:13	jrj
Mercury by Direct Combustion AA	EPA 7473	1	18.2		*	ng/g	2.47	12.35	08/26/25 18:34	rjw
Selenium, total (3050)	EPA 6020B	135	0.820		*	mg/Kg	0.0135	0.0338	09/25/25 17:13	jrj
Silver, total (3050)	EPA 6020B	135	<0.0135	U	*	mg/Kg	0.0135	0.0675	09/25/25 17:13	jrj
Zinc, total (3050)	EPA 6020B	135	26.7		*	mg/Kg	0.81	2.03	09/25/25 17:13	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	78.5		*	%	0.1	0.5	09/21/25 12:01	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 15:11	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:24	jsa

Cantango Ore
Project ID:
Sample ID: KONA CREEK 7

ACZ Sample ID: ***L96629-14***
Date Sampled: *08/03/25 12:30*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	130	0.144			mg/Kg	0.026	0.13	09/25/25 17:15	jrj
Cadmium, total (3050)	EPA 6020B	130	0.131			mg/Kg	0.0065	0.0325	09/25/25 17:15	jrj
Copper, total (3050)	EPA 6020B	130	1.08		*	mg/Kg	0.104	0.26	09/25/25 17:15	jrj
Lead, total (3050)	EPA 6020B	130	<0.013	U		mg/Kg	0.013	0.065	09/25/25 17:15	jrj
Mercury by Direct Combustion AA	EPA 7473	1	20		*	ng/g	2.52	12.6	08/26/25 18:42	rjw
Selenium, total (3050)	EPA 6020B	130	1.35		*	mg/Kg	0.013	0.0325	09/25/25 17:15	jrj
Silver, total (3050)	EPA 6020B	130	<0.013	U	*	mg/Kg	0.013	0.065	09/25/25 17:15	jrj
Zinc, total (3050)	EPA 6020B	130	35.7		*	mg/Kg	0.78	1.95	09/25/25 17:15	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	75.1		*	%	0.1	0.5	09/21/25 15:41	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 15:27	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:31	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 8

ACZ Sample ID: ***L96629-15***
Date Sampled: *08/04/25 10:00*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	165	0.197			mg/Kg	0.033	0.165	09/25/25 17:17	jrj
Cadmium, total (3050)	EPA 6020B	165	0.0345	B		mg/Kg	0.00825	0.0413	09/25/25 17:17	jrj
Copper, total (3050)	EPA 6020B	165	1.18		*	mg/Kg	0.132	0.33	09/25/25 17:17	jrj
Lead, total (3050)	EPA 6020B	165	0.0542	B		mg/Kg	0.0165	0.0825	09/25/25 17:17	jrj
Mercury by Direct Combustion AA	EPA 7473	1	60.4		*	ng/g	2.31	11.55	08/26/25 18:49	rjw
Selenium, total (3050)	EPA 6020B	165	0.777		*	mg/Kg	0.0165	0.0413	09/25/25 17:17	jrj
Silver, total (3050)	EPA 6020B	165	<0.0165	U	*	mg/Kg	0.0165	0.0825	09/25/25 17:17	jrj
Zinc, total (3050)	EPA 6020B	165	22.1		*	mg/Kg	0.99	2.48	09/25/25 17:17	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	73.7		*	%	0.1	0.5	09/21/25 19:21	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 15:44	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:37	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 9

ACZ Sample ID: ***L96629-16***
Date Sampled: *08/04/25 10:00*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	170	0.0456	B		mg/Kg	0.034	0.17	09/25/25 17:19	jrj
Cadmium, total (3050)	EPA 6020B	170	0.114			mg/Kg	0.0085	0.0425	09/25/25 17:19	jrj
Copper, total (3050)	EPA 6020B	170	0.916		*	mg/Kg	0.136	0.34	09/25/25 17:19	jrj
Lead, total (3050)	EPA 6020B	170	<0.017	U		mg/Kg	0.017	0.085	09/25/25 17:19	jrj
Mercury by Direct Combustion AA	EPA 7473	1	35.1		*	ng/g	3.01	15.05	08/26/25 19:04	rjw
Selenium, total (3050)	EPA 6020B	170	0.499		*	mg/Kg	0.017	0.0425	09/25/25 17:19	jrj
Silver, total (3050)	EPA 6020B	170	<0.017	U	*	mg/Kg	0.017	0.085	09/25/25 17:19	jrj
Zinc, total (3050)	EPA 6020B	170	18.6		*	mg/Kg	1.02	2.55	09/25/25 17:19	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.4		*	%	0.1	0.5	09/21/25 23:00	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 16:00	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:44	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 10

ACZ Sample ID: ***L96629-17***
Date Sampled: *08/04/25 10:00*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	135	0.134	B		mg/Kg	0.027	0.135	09/25/25 17:21	jrj
Cadmium, total (3050)	EPA 6020B	135	0.0829			mg/Kg	0.00675	0.0338	09/25/25 17:21	jrj
Copper, total (3050)	EPA 6020B	135	1.10		*	mg/Kg	0.108	0.27	09/25/25 17:21	jrj
Lead, total (3050)	EPA 6020B	135	0.0271	B		mg/Kg	0.0135	0.0675	09/25/25 17:21	jrj
Mercury by Direct Combustion AA	EPA 7473	1	29.2		*	ng/g	2.68	13.4	08/26/25 19:13	rjw
Selenium, total (3050)	EPA 6020B	135	0.863		*	mg/Kg	0.0135	0.0338	09/25/25 17:21	jrj
Silver, total (3050)	EPA 6020B	135	<0.0135	U	*	mg/Kg	0.0135	0.0675	09/25/25 17:21	jrj
Zinc, total (3050)	EPA 6020B	135	29.6		*	mg/Kg	0.81	2.03	09/25/25 17:21	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	75.6		*	%	0.1	0.5	09/22/25 2:40	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 16:17	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:51	jsa

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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: JOHNSON RIVER 11

ACZ Sample ID: ***L96629-18***
Date Sampled: *08/04/25 10:00*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	145	0.0684	B		mg/Kg	0.029	0.145	09/25/25 17:23	jrj
Cadmium, total (3050)	EPA 6020B	145	0.0251	B		mg/Kg	0.00725	0.0363	09/25/25 17:23	jrj
Copper, total (3050)	EPA 6020B	145	0.646		*	mg/Kg	0.116	0.29	09/25/25 17:23	jrj
Lead, total (3050)	EPA 6020B	145	<0.0145	U		mg/Kg	0.0145	0.0725	09/25/25 17:23	jrj
Mercury by Direct Combustion AA	EPA 7473	1	20.9		*	ng/g	2.33	11.65	08/26/25 19:21	rjw
Selenium, total (3050)	EPA 6020B	145	0.628		*	mg/Kg	0.0145	0.0363	09/25/25 17:23	jrj
Silver, total (3050)	EPA 6020B	145	<0.0145	U	*	mg/Kg	0.0145	0.0725	09/25/25 17:23	jrj
Zinc, total (3050)	EPA 6020B	145	23.7		*	mg/Kg	0.87	2.18	09/25/25 17:23	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	77.7		*	%	0.1	0.5	09/22/25 6:20	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 16:33	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 8:58	jsa

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Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: KONA CREEK 8

ACZ Sample ID: ***L96629-19***
Date Sampled: *08/04/25 11:00*
Date Received: *08/14/25*
Sample Matrix: *Fish Tissue*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6020B	130	0.142			mg/Kg	0.026	0.13	09/25/25 17:25	jrj
Cadmium, total (3050)	EPA 6020B	130	0.0866			mg/Kg	0.0065	0.0325	09/25/25 17:25	jrj
Copper, total (3050)	EPA 6020B	130	0.973		*	mg/Kg	0.104	0.26	09/25/25 17:25	jrj
Lead, total (3050)	EPA 6020B	130	<0.013	U		mg/Kg	0.013	0.065	09/25/25 17:25	jrj
Mercury by Direct Combustion AA	EPA 7473	1	17.3	B	*	ng/g	3.81	19.05	08/26/25 19:29	rjw
Selenium, total (3050)	EPA 6020B	130	0.998		*	mg/Kg	0.013	0.0325	09/25/25 17:25	jrj
Silver, total (3050)	EPA 6020B	130	<0.013	U	*	mg/Kg	0.013	0.065	09/25/25 17:25	jrj
Zinc, total (3050)	EPA 6020B	130	28.9		*	mg/Kg	0.78	1.95	09/25/25 17:25	jrj

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	76.6		*	%	0.1	0.5	09/22/25 10:00	clr

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	EPA 3050B								09/18/25 16:49	clr
Fish Tissue Pulverization	EPA 600/4-81-055								08/22/25 9:04	jsa

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA SW-846. Test Methods for Evaluating Solid Waste.
(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

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ACZ Project ID: ***L96629***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Arsenic, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.04559	mg/L	91	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.0006	0.0006			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-0.3	0.3			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	34.6		35.74063	mg/Kg		27.68	41.52			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.05005		.05681	mg/Kg	114	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.05005		.05568	mg/Kg	111	80	120	2	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	12.5125	.0525	14.09814	mg/Kg	112	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	12.5125	.0525	13.44767	mg/Kg	107	75	125	5	20	

Cadmium, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.049533	mg/L	99	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.00015	0.00015			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-0.075	0.075			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	14.5		14.267457	mg/Kg		11.6	17.4			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.05005		.053802	mg/Kg	107	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.05005		.051561	mg/Kg	103	80	120	4	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	12.5125	U	13.427112	mg/Kg	107	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	12.5125	U	13.699216	mg/Kg	109	75	125	2	20	

Copper, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.04805	mg/L	96	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.0024	0.0024			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-1.2	1.2			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	35		38.86762	mg/Kg		28	42			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.05005		.05897	mg/Kg	118	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.05005		.05793	mg/Kg	116	80	120	2	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	12.5125	.912	15.25136	mg/Kg	115	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	12.5125	.912	15.0918	mg/Kg	113	75	125	1	20	

Lead, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.05029	mg/L	101	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.0003	0.0003			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-0.15	0.15			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	.162		.17494	mg/Kg		0.1296	0.1944			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.05005		.05493	mg/Kg	110	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.05005		.05282	mg/Kg	106	80	120	4	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	12.5125	U	13.61131	mg/Kg	109	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	12.5125	U	13.83011	mg/Kg	111	75	125	2	20	

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ACZ Project ID: ***L96629***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Mercury by Direct Combustion AA EPA 7473

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG615986													
WG615986ICV1	ICV	07/22/25 12:09	HG250707-3	100		99.3	ng/g	99	90	110			
WG615986ICV2	ICV	07/22/25 12:16	HG250707-3	100		102	ng/g	102	90	110			
WG615986ICV3	ICV	07/22/25 12:23	HG250707-2	1000		970	ng/g	97	90	110			
WG615986ICV4	ICV	07/22/25 12:30	HG250707-4	10000		9770	ng/g	98	90	110			
WG618459													
WG618459ICV1	ICV	08/26/25 15:07	HG250707-3	100		98.6	ng/g	99	90	110			
WG618459ICV2	ICV	08/26/25 15:14	HG250707-3	100		98.9	ng/g	99	90	110			
WG618459ICV3	ICV	08/26/25 15:22	HG250707-2	1000		984	ng/g	98	90	110			
WG618459ICV4	ICV	08/26/25 15:29	HG250707-4	10000		10100	ng/g	101	90	110			
WG618459PBS	PBS	08/26/25 16:09				U	ng/g		-7.83	7.83			
WG618459LCSS	LCSS	08/26/25 16:17	PCN65989	316		330	ng/g		80	120			
WG618459LCSSD	LCSSD	08/26/25 16:25	PCN65989	316		320	ng/g		80	120	3	20	
L96629-01MS	MS	08/26/25 16:42	HG250707-2				ng/g	95	80	120			
L96629-02DUP	DUP	08/26/25 16:58			54.7	31.5	ng/g				54	20	RD

Moisture Content D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620167													
L96629-01DUP	DUP	09/19/25 16:04			74.3	76.5	%				3	20	

Selenium, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.04911	mg/L	98	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.0003	0.0003			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-0.15	0.15			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	8.3		8.40113	mg/Kg		6.64	9.96			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.025025		.02853	mg/Kg	114	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.025025		.02719	mg/Kg	109	80	120	5	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	6.25625	.942	7.91199	mg/Kg	111	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	6.25625	.942	7.70214	mg/Kg	108	75	125	3	20	

Silver, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.02		.02105	mg/L	105	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.0003	0.0003			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-0.15	0.15			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	2.05		2.02169	mg/Kg		1.64	2.46			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.01		.01066	mg/Kg	107	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.01		.01014	mg/Kg	101	80	120	5	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	2.5	U	2.53359	mg/Kg	101	75	125			
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	2.5	U	2.56815	mg/Kg	103	75	125	1	20	

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ACZ Project ID: ***L96629***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620675													
WG620675ICV	ICV	09/25/25 16:21	MS250911-3	.05		.0488	mg/L	98	90	110			
WG620675ICB	ICB	09/25/25 16:23				U	mg/L		-0.018	0.018			
WG620123PBS	PBS	09/25/25 16:33				U	mg/Kg		-9	9			
WG620123LCSS	LCSS	09/25/25 16:34	PCN627354	105.3		110.8257	mg/Kg		84.24	126.36			
WG620123LFB	LFB	09/25/25 16:36	MS250917-4	.050015		.0573	mg/Kg	115	80	120			
WG620123LFBD	LFBD	09/25/25 16:38	MS250917-4	.050015		.0539	mg/Kg	108	80	120	6	20	
L96629-01MS	MS	09/25/25 16:42	MS250917-4	12.50375	24.2	41.0035	mg/Kg	134	75	125			M3
L96629-01MSD	MSD	09/25/25 16:44	MS250917-4	12.50375	24.2	45.4321	mg/Kg	170	75	125	10	20	M3

Cantango Ore ACZ Project ID: ***L96629***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96629-01	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-02	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-03	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-04	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-05	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96629-06	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-07	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-08	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-09	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

Cantango Ore ACZ Project ID: ***L96629***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96629-10	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-11	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-12	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-13	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96629-14	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-15	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-16	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-17	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

Inorganic Extended Qualifier Report

Cantango Ore ACZ Project ID: ***L96629***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96629-18	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
L96629-19	WG620675	Copper, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG618459	Mercury by Direct Combustion AA	EPA 7473	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG620675	Zinc, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

Certification Qualifiers

Cantango Ore

ACZ Project ID: ***L96629***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Mercury by Direct Combustion AA	EPA 7473
Selenium, total (3050)	EPA 6020B
Silver, total (3050)	EPA 6020B

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Moisture Content	D2216-80

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Cantango Ore

ACZ Project ID: L96629
Date Received: 08/14/2025 15:52
Received By:
Date Printed: 8/15/2025

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody form or other directive shipping papers present?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
5) If samples are received past hold time, proceed with requested short hold time analyses?	X		
6) Is the Chain of Custody form complete and accurate?	X		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?		X	

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
NA45906	5.3	NA	15	N/A

Ice Present? Yes - Gel ice was present in the shipment container(s).

Was this a domestic shipment?

Yes - This is a domestic shipment.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Cantango Ore

ACZ Project ID: L96629
Date Received: 08/14/2025 15:52
Received By:
Date Printed: 8/15/2025

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

[1] The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L96629

CHAIN of CUSTODY

Report to:

Name: Allegra Cairns	Address: 405-375 Water Street West
Company: Contango Ore	Vancouver, BC Canada V6B 5C6
E-mail: acairns@contangoore.com	Telephone: 604-629-1165

Copy of Report to:

Name: Josh Brekken	E-mail: josh.brekken@alaska.gov
Company: Alaska Dept. of Fish and Game	Telephone: 907-267-2113

Invoice to:

Name: Allegra Cairns	Address: 405-375 Water Street West
Company: Contango Ore	Vancouver, BC Canada V6B 5C6
E-mail: acairns.contangoore.com	Telephone: 604-629-1165

Copy of Invoice to:

Name:	Address:
Company:	
E-mail:	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✓

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Josh Brekken **Sampler's Site Information** **State** Alaska **Zip code** 99518 **Time Zone** AKDT

***Sampler's Signature:** Josh Brekken Digitally signed by Josh Brekken Date: 2025.08.08 11:01:28 -08'00'

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#:

Reporting state for compliance testing: not for compliance testing

Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals	(As, Cd, Cu)+	Pb, Hg, Se+	Ag, Zn)				
Johnson River 1-7	8/3/2025 09:40	Other	7	✓							
Kona Creek 1-7	8/3/2025 12:30	Other	7	✓							
Johnson River 8-11	8/4/2025 10:00	Other	4	✓							
Kona Creek 8	8/4/2025 11:00	Other	1	✓							

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Whole Fish Samples
Metals analysis for whole fish samples to include: As, Cd, Cu, Pb, Hg, Se, Ag, and Zn.

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Josh Brekken Digitally signed by Josh Brekken Date: 2025.08.12 09:18:44 -08'00'	8/12/2025		8/14/25 1152

Qualtrax ID: 1984 Revision #: 2 White - Return with sample. Yellow - Retain for your records.

L96629 Chain of Custo

APPENDIX D. ANALYTICAL LABORATORY REPORTS SEDIMENT ANALYSIS, JOHNSON TRACT 2023

Wet Weight to Dry Weight Conversion Table – Sediment

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR-BM-23-SED	Upper Johnson	Aluminum, total (3050)	20400	**27,945.205**		mg/kg	5	6.849315068	25	73.000
JR-BM-23-SED	Upper Johnson	Arsenic, total (3050)	7.89	**10.808**		mg/kg	0.1	0.136986301	0.5	73.000
JR-BM-23-SED	Upper Johnson	Cadmium, total (3050)	0.203	**0.278**		mg/kg	0.025	0.034246575	0.125	73.000
JR-BM-23-SED	Upper Johnson	Copper, total (3050)	42.0	**57.534**		mg/kg	0.4	0.547945205	1	73.000
JR-BM-23-SED	Upper Johnson	Iron, total (3050)	26500	**36,301.370**		mg/kg	6	8.219178082	15	73.000
JR-BM-23-SED	Upper Johnson	Lead, total (3050)	1.59	**2.178**		mg/kg	0.05	0.068493151	0.25	73.000
JR-BM-23-SED	Upper Johnson	Mercury by Direct Combustion AA	47.1	**64.521**	H	ng/g	3.6	4.931506849	18	73.000
JR-BM-23-SED	Upper Johnson	Selenium, total (3050)	0.131	**0.179**		mg/kg	0.05	0.068493151	0.125	73.000
JR-BM-23-SED	Upper Johnson	Silver, total (3050)	0.0644	**0.088**	B	mg/kg	0.05	0.068493151	0.25	73.000
JR-BM-23-SED	Upper Johnson	Zinc, total (3050)	41.8	**57.260**		mg/kg	2	2.739726027	5	73.000
KR-BM-23-SED	Kona Creek	Aluminum, total (3050)	23400	**28,746.929**		mg/kg	5.05	6.203931204	25.3	81.400
KR-BM-23-SED	Kona Creek	Arsenic, total (3050)	4.86	**5.971**		mg/kg	0.101	0.124078624	0.505	81.400
KR-BM-23-SED	Kona Creek	Cadmium, total (3050)	0.499	**0.613**		mg/kg	0.0253	0.031081081	0.126	81.400
KR-BM-23-SED	Kona Creek	Copper, total (3050)	18.9	**23.219**		mg/kg	0.404	0.496314496	1.01	81.400
KR-BM-23-SED	Kona Creek	Iron, total (3050)	23100	**28,378.378**		mg/kg	6.06	7.444717445	15.2	81.400
KR-BM-23-SED	Kona Creek	Lead, total (3050)	6.21	**7.629**		mg/kg	0.0505	0.062039312	0.253	81.400
KR-BM-23-SED	Kona Creek	Mercury by Direct Combustion AA	8.07	**9.914**	BH	ng/g	2.94	3.611793612	14.7	81.400
KR-BM-23-SED	Kona Creek	Selenium, total (3050)	0.242	**0.297**		mg/kg	0.0505	0.062039312	0.126	81.400
KR-BM-23-SED	Kona Creek	Silver, total (3050)	0.133	**0.163**	B	mg/kg	0.0505	0.062039312	0.253	81.400
KR-BM-23-SED	Kona Creek	Zinc, total (3050)	59.5	**73.096**		mg/kg	2.02	2.481572482	5.05	81.400

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was anlyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

2024

Wet Weight to Dry Weight Conversion Table – Sediment

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JR SED-ADFG	Upper Johnson	Aluminum, total (3050)	20600	**25307.125**		mg/kg	7.000	8.600	25.000	81.4
JR SED-ADFG	Upper Johnson	Arsenic, total (3050)	5.82	**7.150**		mg/kg	0.100	0.123	0.500	81.4
JR SED-ADFG	Upper Johnson	Cadmium, total (3050)	0.130	**0.160**		mg/kg	0.025	0.031	0.125	81.4
JR SED-ADFG	Upper Johnson	Copper, total (3050)	38.1	**46.806**		mg/kg	0.400	0.491	1.000	81.4
JR SED-ADFG	Upper Johnson	Iron, total (3050)	36500	**44840.295**		mg/kg	6.000	7.371	15.000	81.4
JR SED-ADFG	Upper Johnson	Lead, total (3050)	1.47	**1.806**		mg/kg	0.050	0.061	0.250	81.4
JR SED-ADFG	Upper Johnson	Mercury by Direct Combustion AA	14.5	**17.813**	B	ng/g	4.310	5.295	21.550	81.4
JR SED-ADFG	Upper Johnson	Selenium, total (3050)	0.0763	**0.094**	B	mg/kg	0.050	0.061	0.125	81.4
JR SED-ADFG	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.050	0.061	0.250	81.4
JR SED-ADFG	Upper Johnson	Zinc, total (3050)	33.7	**41.400**		mg/kg	2.000	2.457	5.000	81.4
KC SED-ADFG	Kona Creek	Aluminum, total (3050)	24100	**30976.864**		mg/kg	7.140	9.177	25.500	77.8
KC SED-ADFG	Kona Creek	Arsenic, total (3050)	5.05	**6.491**		mg/kg	0.102	0.131	0.510	77.8
KC SED-ADFG	Kona Creek	Cadmium, total (3050)	0.504	**0.648**		mg/kg	0.026	0.033	0.128	77.8
KC SED-ADFG	Kona Creek	Copper, total (3050)	26.0	**33.419**		mg/kg	0.408	0.524	1.020	77.8
KC SED-ADFG	Kona Creek	Iron, total (3050)	29800	**38303.342**		mg/kg	6.120	7.866	15.300	77.8
KC SED-ADFG	Kona Creek	Lead, total (3050)	7.59	**9.756**		mg/kg	0.051	0.066	0.255	77.8
KC SED-ADFG	Kona Creek	Mercury by Direct Combustion AA	74.7	**96.015**		ng/g	4.670	6.003	23.350	77.8
KC SED-ADFG	Kona Creek	Selenium, total (3050)	0.524	**0.674**		mg/kg	0.051	0.066	0.128	77.8
KC SED-ADFG	Kona Creek	Silver, total (3050)		**0.000**	U	mg/kg	0.051	0.066	0.255	77.8
KC SED-ADFG	Kona Creek	Zinc, total (3050)	82.4	**105.913**		mg/kg	2.040	2.622	5.100	77.8

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was anlyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

2025

Wet Weight to Dry Weight Conversion Table – Sediment

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JOHNSON SED 1	Upper Johnson	Aluminum, total (3050)	33600	**46027.397**		mg/kg	100	136.986	300	73.0
JOHNSON SED 1	Upper Johnson	Arsenic, total (3050)	6.86	**9.397**		mg/kg	0.1	0.137	0.5	73.0
JOHNSON SED 1	Upper Johnson	Cadmium, total (3050)	0.211	**0.289**		mg/kg	0.025	0.034	0.125	73.0
JOHNSON SED 1	Upper Johnson	Copper, total (3050)	42.3	**57.945**		mg/kg	0.4	0.548	1	73.0
JOHNSON SED 1	Upper Johnson	Iron, total (3050)	32300	**44246.575**		mg/kg	6	8.219	15	73.0
JOHNSON SED 1	Upper Johnson	Lead, total (3050)	1.96	**2.685**		mg/kg	0.05	0.068	0.25	73.0
JOHNSON SED 1	Upper Johnson	Manganese, total (3050)	454	**621.918**		mg/kg	1	1.370	5	73.0
JOHNSON SED 1	Upper Johnson	Mercury by Direct Combustion AA	109	**149.315**		ng/g	2.74	3.753	13.7	73.0
JOHNSON SED 1	Upper Johnson	Nickel, total (3050)	3.10	**4.247**	B	mg/kg	0.8	1.096	4	73.0
JOHNSON SED 1	Upper Johnson	Selenium, total (3050)	0.0526	**0.072**	B	mg/kg	0.05	0.068	0.125	73.0
JOHNSON SED 1	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.05	0.068	0.25	73.0
JOHNSON SED 1	Upper Johnson	Zinc, total (3050)	58.5	**80.137**		mg/kg	2	2.740	5	73.0
JOHNSON SED 2	Upper Johnson	Aluminum, total (3050)	25300	**31004.902**		mg/kg	100	122.549	300	81.6
JOHNSON SED 2	Upper Johnson	Arsenic, total (3050)	6.54	**8.015**		mg/kg	0.1	0.123	0.5	81.6
JOHNSON SED 2	Upper Johnson	Cadmium, total (3050)	0.178	**0.218**		mg/kg	0.025	0.031	0.125	81.6
JOHNSON SED 2	Upper Johnson	Copper, total (3050)	40.8	**50.000**		mg/kg	0.4	0.490	1	81.6
JOHNSON SED 2	Upper Johnson	Iron, total (3050)	28500	**34926.471**		mg/kg	6	7.353	15	81.6
JOHNSON SED 2	Upper Johnson	Lead, total (3050)	1.81	**2.218**		mg/kg	0.05	0.061	0.25	81.6
JOHNSON SED 2	Upper Johnson	Manganese, total (3050)	415	**508.578**		mg/kg	1	1.225	5	81.6
JOHNSON SED 2	Upper Johnson	Mercury by Direct Combustion AA	101	**123.775**		ng/g	2.95	3.615	14.75	81.6
JOHNSON SED 2	Upper Johnson	Nickel, total (3050)	2.64	**3.235**	B	mg/kg	0.8	0.980	4	81.6
JOHNSON SED 2	Upper Johnson	Selenium, total (3050)	0.0546	**0.067**	B	mg/kg	0.05	0.061	0.125	81.6
JOHNSON SED 2	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.05	0.061	0.25	81.6
JOHNSON SED 2	Upper Johnson	Zinc, total (3050)	53.2	**65.196**		mg/kg	2	2.451	5	81.6
JOHNSON SED 3	Upper Johnson	Aluminum, total (3050)	28300	**33610.451**		mg/kg	100	118.765	300	84.2
JOHNSON SED 3	Upper Johnson	Arsenic, total (3050)	6.91	**8.207**		mg/kg	0.1	0.119	0.5	84.2
JOHNSON SED 3	Upper Johnson	Cadmium, total (3050)	0.186	**0.221**		mg/kg	0.025	0.030	0.125	84.2
JOHNSON SED 3	Upper Johnson	Copper, total (3050)	41.7	**49.525**		mg/kg	0.4	0.475	1	84.2
JOHNSON SED 3	Upper Johnson	Iron, total (3050)	31300	**37173.397**		mg/kg	6	7.126	15	84.2
JOHNSON SED 3	Upper Johnson	Lead, total (3050)	2.43	**2.886**		mg/kg	0.05	0.059	0.25	84.2
JOHNSON SED 3	Upper Johnson	Manganese, total (3050)	458	**543.943**		mg/kg	1	1.188	5	84.2
JOHNSON SED 3	Upper Johnson	Mercury by Direct Combustion AA	72.6	**86.223**		ng/g	2.53	3.005	12.65	84.2

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
JOHNSON SED 3	Upper Johnson	Nickel, total (3050)	3.02	**3.587**	B	mg/kg	0.8	0.950	4	84.2
JOHNSON SED 3	Upper Johnson	Selenium, total (3050)	0.0571	**0.068**	B	mg/kg	0.05	0.059	0.125	84.2
JOHNSON SED 3	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.05	0.059	0.25	84.2
JOHNSON SED 3	Upper Johnson	Zinc, total (3050)	59.3	**70.428**		mg/kg	2	2.375	5	84.2
JOHNSON SED 4	Upper Johnson	Aluminum, total (3050)	29400	**38033.635**		mg/kg	100	129.366	300	77.3
JOHNSON SED 4	Upper Johnson	Arsenic, total (3050)	6.79	**8.784**		mg/kg	0.1	0.129	0.5	77.3
JOHNSON SED 4	Upper Johnson	Cadmium, total (3050)	0.194	**0.251**		mg/kg	0.025	0.032	0.125	77.3
JOHNSON SED 4	Upper Johnson	Copper, total (3050)	44.2	**57.180**		mg/kg	0.4	0.517	1	77.3
JOHNSON SED 4	Upper Johnson	Iron, total (3050)	29900	**38680.466**		mg/kg	6	7.762	15	77.3
JOHNSON SED 4	Upper Johnson	Lead, total (3050)	2.37	**3.066**		mg/kg	0.05	0.065	0.25	77.3
JOHNSON SED 4	Upper Johnson	Manganese, total (3050)	420	**543.338**		mg/kg	1	1.294	5	77.3
JOHNSON SED 4	Upper Johnson	Mercury by Direct Combustion AA	110	**142.303**		ng/g	2.26	2.924	11.3	77.3
JOHNSON SED 4	Upper Johnson	Nickel, total (3050)	2.92	**3.777**	B	mg/kg	0.8	1.035	4	77.3
JOHNSON SED 4	Upper Johnson	Selenium, total (3050)	0.0555	**0.072**	B	mg/kg	0.05	0.065	0.125	77.3
JOHNSON SED 4	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.05	0.065	0.25	77.3
JOHNSON SED 4	Upper Johnson	Zinc, total (3050)	56.9	**73.609**		mg/kg	2	2.587	5	77.3
JOHNSON SED 5	Upper Johnson	Aluminum, total (3050)	32900	**43983.957**		mg/kg	100	133.690	300	74.8
JOHNSON SED 5	Upper Johnson	Arsenic, total (3050)	7.03	**9.398**		mg/kg	0.1	0.134	0.5	74.8
JOHNSON SED 5	Upper Johnson	Cadmium, total (3050)	0.211	**0.282**		mg/kg	0.025	0.033	0.125	74.8
JOHNSON SED 5	Upper Johnson	Copper, total (3050)	42.5	**56.818**		mg/kg	0.4	0.535	1	74.8
JOHNSON SED 5	Upper Johnson	Iron, total (3050)	31400	**41978.610**		mg/kg	6	8.021	15	74.8
JOHNSON SED 5	Upper Johnson	Lead, total (3050)	2.07	**2.767**		mg/kg	0.05	0.067	0.25	74.8
JOHNSON SED 5	Upper Johnson	Manganese, total (3050)	462	**617.647**		mg/kg	1	1.337	5	74.8
JOHNSON SED 5	Upper Johnson	Mercury by Direct Combustion AA	118	**157.754**		ng/g	2.74	3.663	13.7	74.8
JOHNSON SED 5	Upper Johnson	Nickel, total (3050)	3.14	**4.198**	B	mg/kg	0.8	1.070	4	74.8
JOHNSON SED 5	Upper Johnson	Selenium, total (3050)	0.0681	**0.091**	B	mg/kg	0.05	0.067	0.125	74.8
JOHNSON SED 5	Upper Johnson	Silver, total (3050)		**0.000**	U	mg/kg	0.05	0.067	0.25	74.8
JOHNSON SED 5	Upper Johnson	Zinc, total (3050)	58.7	**78.476**		mg/kg	2	2.674	5	74.8
KONA SED 1	Kona Creek	Aluminum, total (3050)	28700	**36375.158**		mg/kg	101	128.010	303	78.9
KONA SED 1	Kona Creek	Arsenic, total (3050)	4.86	**6.160**		mg/kg	0.101	0.128	0.505	78.9
KONA SED 1	Kona Creek	Cadmium, total (3050)	0.525	**0.665**		mg/kg	0.0253	0.032	0.126	78.9
KONA SED 1	Kona Creek	Copper, total (3050)	27.8	**35.234**		mg/kg	0.404	0.512	1.01	78.9
KONA SED 1	Kona Creek	Iron, total (3050)	25900	**32826.362**		mg/kg	6.06	7.681	15.2	78.9
KONA SED 1	Kona Creek	Lead, total (3050)	23.9	**30.292**		mg/kg	0.0505	0.064	0.253	78.9
KONA SED 1	Kona Creek	Manganese, total (3050)	446	**565.272**		mg/kg	1.01	1.280	5.05	78.9

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KONA SED 1	Kona Creek	Mercury by Direct Combustion AA	12.8	**16.223**		ng/g	2.19	2.776	10.95	78.9
KONA SED 1	Kona Creek	Nickel, total (3050)	4.53	**5.741**		mg/kg	0.808	1.024	4.04	78.9
KONA SED 1	Kona Creek	Selenium, total (3050)	0.312	**0.395**		mg/kg	0.0505	0.064	0.126	78.9
KONA SED 1	Kona Creek	Silver, total (3050)	0.125	**0.158**	B	mg/kg	0.0505	0.064	0.253	78.9
KONA SED 1	Kona Creek	Zinc, total (3050)	77.0	**97.592**		mg/kg	2.02	2.560	5.05	78.9
KONA SED 3	Kona Creek	Aluminum, total (3050)	30100	**36308.806**		mg/kg	101	121.834	303	82.9
KONA SED 3	Kona Creek	Arsenic, total (3050)	4.70	**5.669**		mg/kg	0.101	0.122	0.505	82.9
KONA SED 3	Kona Creek	Cadmium, total (3050)	0.461	**0.556**		mg/kg	0.0253	0.031	0.126	82.9
KONA SED 3	Kona Creek	Copper, total (3050)	28.3	**34.138**		mg/kg	0.404	0.487	1.01	82.9
KONA SED 3	Kona Creek	Iron, total (3050)	22500	**27141.134**		mg/kg	6.06	7.310	15.2	82.9
KONA SED 3	Kona Creek	Lead, total (3050)	6.24	**7.527**		mg/kg	0.0505	0.061	0.253	82.9
KONA SED 3	Kona Creek	Manganese, total (3050)	461	**556.092**		mg/kg	1.01	1.218	5.05	82.9
KONA SED 3	Kona Creek	Mercury by Direct Combustion AA	24	**28.951**		ng/g	1.91	2.304	9.55	82.9
KONA SED 3	Kona Creek	Nickel, total (3050)	4.56	**5.501**		mg/kg	0.808	0.975	4.04	82.9
KONA SED 3	Kona Creek	Selenium, total (3050)	0.214	**0.258**		mg/kg	0.0505	0.061	0.126	82.9
KONA SED 3	Kona Creek	Silver, total (3050)	0.0758	**0.091**	B	mg/kg	0.0505	0.061	0.253	82.9
KONA SED 3	Kona Creek	Zinc, total (3050)	76.8	**92.642**		mg/kg	2.02	2.437	5.05	82.9
KONA SED 4	Kona Creek	Aluminum, total (3050)	28300	**38140.162**		mg/kg	100	134.771	300	74.2
KONA SED 4	Kona Creek	Arsenic, total (3050)	4.19	**5.647**		mg/kg	0.1	0.135	0.5	74.2
KONA SED 4	Kona Creek	Cadmium, total (3050)	0.425	**0.573**		mg/kg	0.025	0.034	0.125	74.2
KONA SED 4	Kona Creek	Copper, total (3050)	22.7	**30.593**		mg/kg	0.4	0.539	1	74.2
KONA SED 4	Kona Creek	Iron, total (3050)	23800	**32075.472**		mg/kg	6	8.086	15	74.2
KONA SED 4	Kona Creek	Lead, total (3050)	5.31	**7.156**		mg/kg	0.05	0.067	0.25	74.2
KONA SED 4	Kona Creek	Manganese, total (3050)	409	**551.213**		mg/kg	1	1.348	5	74.2
KONA SED 4	Kona Creek	Mercury by Direct Combustion AA	19.1	**25.741**		ng/g	1.9	2.561	9.5	74.2
KONA SED 4	Kona Creek	Nickel, total (3050)	4.45	**5.997**		mg/kg	0.8	1.078	4	74.2
KONA SED 4	Kona Creek	Selenium, total (3050)	0.299	**0.403**		mg/kg	0.05	0.067	0.125	74.2
KONA SED 4	Kona Creek	Silver, total (3050)	0.0759	**0.102**	B	mg/kg	0.05	0.067	0.25	74.2
KONA SED 4	Kona Creek	Zinc, total (3050)	69.7	**93.935**		mg/kg	2	2.695	5	74.2
KONA SED 5	Kona Creek	Aluminum, total (3050)	32900	**42671.855**		mg/kg	100	129.702	300	77.1
KONA SED 5	Kona Creek	Arsenic, total (3050)	3.95	**5.123**		mg/kg	0.1	0.130	0.5	77.1
KONA SED 5	Kona Creek	Cadmium, total (3050)	0.495	**0.642**		mg/kg	0.025	0.032	0.125	77.1
KONA SED 5	Kona Creek	Copper, total (3050)	23.1	**29.961**		mg/kg	0.4	0.519	1	77.1
KONA SED 5	Kona Creek	Iron, total (3050)	23000	**29831.388**		mg/kg	6	7.782	15	77.1
KONA SED 5	Kona Creek	Lead, total (3050)	5.39	**6.991**		mg/kg	0.05	0.065	0.25	77.1

CLIENTID	SITE	ANALYTE	RESULT	Dry Wt Result	QUAL	UNITS	MDL	Dry Wt MDL	PQL	% Solid
KONA SED 5	Kona Creek	Manganese, total (3050)	403	**522.698**		mg/kg	1	1.297	5	77.1
KONA SED 5	Kona Creek	Mercury by Direct Combustion AA	50.8	**65.888**		ng/g	2.13	2.763	10.65	77.1
KONA SED 5	Kona Creek	Nickel, total (3050)	3.88	**5.032**	B	mg/kg	0.8	1.038	4	77.1
KONA SED 5	Kona Creek	Selenium, total (3050)	0.213	**0.276**		mg/kg	0.05	0.065	0.125	77.1
KONA SED 5	Kona Creek	Silver, total (3050)	0.0741	**0.096**	B	mg/kg	0.05	0.065	0.25	77.1
KONA SED 5	Kona Creek	Zinc, total (3050)	68.6	**88.975**		mg/kg	2	2.594	5	77.1

B - Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.

U - The material was anlyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

PQL - Practical Quantitation Limit. Synonymous with the EPA term "minimum level"

MDL - Method Detection Limit.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

September 19, 2025

Report to:
Ron Benkert
Alaska Dept of Fish and Game
333 Rasberry Rd.

Anchorage, AK 99518

cc: Allegra Cairns

Bill to:
Allegra Cairns
HighGold Mining Inc.
375 Water Street
Suite 405
Vancouver, BC V6B 5C6

Project ID:
ACZ Project ID: L96628

Ron Benkert:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 14, 2025. This project has been assigned to ACZ's project number, L96628. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L96628. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after October 19, 2025. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Cantango Ore
Project ID:
Sample ID: JOHNSON SED 1

ACZ Sample ID: ***L96628-01***
Date Sampled: *08/02/25 13:30*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	33600		*	mg/Kg	100	300	09/18/25 12:19	aps
Arsenic, total (3050)	EPA 6020B	500	6.86		*	mg/Kg	0.1	0.5	09/14/25 20:12	jrj
Cadmium, total (3050)	EPA 6020B	500	0.211		*	mg/Kg	0.025	0.125	09/14/25 20:12	jrj
Copper, total (3050)	EPA 6020B	500	42.3			mg/Kg	0.4	1	09/14/25 20:12	jrj
Iron, total (3050)	EPA 6010D	100	32300		*	mg/Kg	6	15	09/12/25 8:48	msp
Lead, total (3050)	EPA 6020B	500	1.96			mg/Kg	0.05	0.25	09/14/25 20:12	jrj
Manganese, total (3050)	EPA 6010D	100	454		*	mg/Kg	1	5	09/12/25 8:48	msp
Mercury by Direct Combustion AA	EPA 7473	1	109		*	ng/g	2.74	13.7	08/22/25 14:33	rjw
Nickel, total (3050)	EPA 6010D	100	3.10	B		mg/Kg	0.8	4	09/11/25 0:35	wtc
Selenium, total (3050)	EPA 6020B	500	0.0526	B		mg/Kg	0.05	0.125	09/14/25 20:12	jrj
Silver, total (3050)	EPA 6020B	500	<0.05	U	*	mg/Kg	0.05	0.25	09/14/25 20:12	jrj
Zinc, total (3050)	EPA 6010D	100	58.5			mg/Kg	2	5	09/12/25 8:48	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	27.0		*	%	0.1	0.5	09/09/25 0:00	grw
Solids, Percent	D2216-80	1	73.0		*	%	0.1	0.5	09/09/25 0:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 8:55	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 10:50	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 10:50	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 8:45	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON SED 2

ACZ Sample ID: ***L96628-02***
Date Sampled: *08/02/25 13:35*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	25300		*	mg/Kg	100	300	09/18/25 12:21	aps
Arsenic, total (3050)	EPA 6020B	500	6.54		*	mg/Kg	0.1	0.5	09/14/25 20:14	jrj
Cadmium, total (3050)	EPA 6020B	500	0.178		*	mg/Kg	0.025	0.125	09/14/25 20:14	jrj
Copper, total (3050)	EPA 6020B	500	40.8			mg/Kg	0.4	1	09/14/25 20:14	jrj
Iron, total (3050)	EPA 6010D	100	28500		*	mg/Kg	6	15	09/12/25 8:52	msp
Lead, total (3050)	EPA 6020B	500	1.81			mg/Kg	0.05	0.25	09/14/25 20:14	jrj
Manganese, total (3050)	EPA 6010D	100	415		*	mg/Kg	1	5	09/12/25 8:52	msp
Mercury by Direct Combustion AA	EPA 7473	1	101		*	ng/g	2.95	14.75	08/22/25 14:41	rjw
Nickel, total (3050)	EPA 6010D	100	2.64	B		mg/Kg	0.8	4	09/11/25 0:37	wtc
Selenium, total (3050)	EPA 6020B	500	0.0546	B		mg/Kg	0.05	0.125	09/14/25 20:14	jrj
Silver, total (3050)	EPA 6020B	500	<0.05	U	*	mg/Kg	0.05	0.25	09/14/25 20:14	jrj
Zinc, total (3050)	EPA 6010D	100	53.2			mg/Kg	2	5	09/12/25 8:52	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	18.4		*	%	0.1	0.5	09/09/25 1:00	grw
Solids, Percent	D2216-80	1	81.6		*	%	0.1	0.5	09/09/25 1:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 8:57	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 11:06	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 11:06	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 8:48	jsa

ACZ **Laboratories, Inc.**
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Cantango Ore
Project ID:
Sample ID: JOHNSON SED 3

ACZ Sample ID: ***L96628-03***
Date Sampled: *08/02/25 13:40*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	28300		*	mg/Kg	100	300	09/18/25 12:23	aps
Arsenic, total (3050)	EPA 6020B	500	6.91		*	mg/Kg	0.1	0.5	09/14/25 20:20	jrj
Cadmium, total (3050)	EPA 6020B	500	0.186		*	mg/Kg	0.025	0.125	09/14/25 20:20	jrj
Copper, total (3050)	EPA 6020B	500	41.7			mg/Kg	0.4	1	09/14/25 20:20	jrj
Iron, total (3050)	EPA 6010D	100	31300		*	mg/Kg	6	15	09/12/25 8:56	msp
Lead, total (3050)	EPA 6020B	500	2.43			mg/Kg	0.05	0.25	09/14/25 20:20	jrj
Manganese, total (3050)	EPA 6010D	100	458		*	mg/Kg	1	5	09/12/25 8:56	msp
Mercury by Direct Combustion AA	EPA 7473	1	72.6		*	ng/g	2.53	12.65	08/22/25 14:49	rjw
Nickel, total (3050)	EPA 6010D	100	3.02	B		mg/Kg	0.8	4	09/11/25 0:40	wtc
Selenium, total (3050)	EPA 6020B	500	0.0571	B		mg/Kg	0.05	0.125	09/14/25 20:20	jrj
Silver, total (3050)	EPA 6020B	500	<0.05	U	*	mg/Kg	0.05	0.25	09/14/25 20:20	jrj
Zinc, total (3050)	EPA 6010D	100	59.3			mg/Kg	2	5	09/12/25 8:56	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	15.8		*	%	0.1	0.5	09/09/25 2:00	grw
Solids, Percent	D2216-80	1	84.2		*	%	0.1	0.5	09/09/25 2:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:00	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 11:21	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 11:21	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 8:52	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON SED 4

ACZ Sample ID: ***L96628-04***
Date Sampled: *08/02/25 13:45*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	29400		*	mg/Kg	100	300	09/18/25 12:25	aps
Arsenic, total (3050)	EPA 6020B	500	6.79		*	mg/Kg	0.1	0.5	09/14/25 20:21	jrj
Cadmium, total (3050)	EPA 6020B	500	0.194		*	mg/Kg	0.025	0.125	09/14/25 20:21	jrj
Copper, total (3050)	EPA 6020B	500	44.2			mg/Kg	0.4	1	09/14/25 20:21	jrj
Iron, total (3050)	EPA 6010D	100	29900		*	mg/Kg	6	15	09/12/25 9:00	msp
Lead, total (3050)	EPA 6020B	500	2.37			mg/Kg	0.05	0.25	09/14/25 20:21	jrj
Manganese, total (3050)	EPA 6010D	100	420		*	mg/Kg	1	5	09/12/25 9:00	msp
Mercury by Direct Combustion AA	EPA 7473	1	110		*	ng/g	2.26	11.3	08/22/25 14:57	rjw
Nickel, total (3050)	EPA 6010D	100	2.92	B		mg/Kg	0.8	4	09/11/25 0:42	wtc
Selenium, total (3050)	EPA 6020B	500	0.0555	B		mg/Kg	0.05	0.125	09/14/25 20:21	jrj
Silver, total (3050)	EPA 6020B	500	<0.05	U	*	mg/Kg	0.05	0.25	09/14/25 20:21	jrj
Zinc, total (3050)	EPA 6010D	100	56.9			mg/Kg	2	5	09/12/25 9:00	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	22.7		*	%	0.1	0.5	09/09/25 3:00	grw
Solids, Percent	D2216-80	1	77.3		*	%	0.1	0.5	09/09/25 3:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:02	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 11:37	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 11:37	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 8:55	jsa

Cantango Ore
Project ID:
Sample ID: JOHNSON SED 5

ACZ Sample ID: ***L96628-05***
Date Sampled: *08/02/25 13:50*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	32900		*	mg/Kg	100	300	09/18/25 12:31	aps
Arsenic, total (3050)	EPA 6020B	500	7.03		*	mg/Kg	0.1	0.5	09/14/25 20:23	jrj
Cadmium, total (3050)	EPA 6020B	500	0.211		*	mg/Kg	0.025	0.125	09/14/25 20:23	jrj
Copper, total (3050)	EPA 6020B	500	42.5			mg/Kg	0.4	1	09/14/25 20:23	jrj
Iron, total (3050)	EPA 6010D	100	31400		*	mg/Kg	6	15	09/12/25 9:05	msp
Lead, total (3050)	EPA 6020B	500	2.07			mg/Kg	0.05	0.25	09/14/25 20:23	jrj
Manganese, total (3050)	EPA 6010D	100	462		*	mg/Kg	1	5	09/12/25 9:05	msp
Mercury by Direct Combustion AA	EPA 7473	1	118		*	ng/g	2.74	13.7	08/22/25 15:05	rjw
Nickel, total (3050)	EPA 6010D	100	3.14	B		mg/Kg	0.8	4	09/11/25 0:44	wtc
Selenium, total (3050)	EPA 6020B	500	0.0681	B		mg/Kg	0.05	0.125	09/14/25 20:23	jrj
Silver, total (3050)	EPA 6020B	500	<0.05	U	*	mg/Kg	0.05	0.25	09/14/25 20:23	jrj
Zinc, total (3050)	EPA 6010D	100	58.7			mg/Kg	2	5	09/12/25 9:05	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	25.2		*	%	0.1	0.5	09/09/25 4:00	grw
Solids, Percent	D2216-80	1	74.8		*	%	0.1	0.5	09/09/25 4:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:05	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 11:52	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 11:52	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 8:59	jsa

Cantango Ore
Project ID:
Sample ID: KONA SED 1

ACZ Sample ID: ***L96628-06***
Date Sampled: *08/02/25 15:35*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20200	28700		*	mg/Kg	101	303	09/18/25 12:33	aps
Arsenic, total (3050)	EPA 6020B	505	4.86		*	mg/Kg	0.101	0.505	09/14/25 20:25	jrj
Cadmium, total (3050)	EPA 6020B	505	0.525		*	mg/Kg	0.0253	0.126	09/14/25 20:25	jrj
Copper, total (3050)	EPA 6020B	505	27.8			mg/Kg	0.404	1.01	09/14/25 20:25	jrj
Iron, total (3050)	EPA 6010D	101	25900		*	mg/Kg	6.06	15.2	09/12/25 9:09	msp
Lead, total (3050)	EPA 6020B	505	23.9			mg/Kg	0.0505	0.253	09/14/25 20:25	jrj
Manganese, total (3050)	EPA 6010D	101	446		*	mg/Kg	1.01	5.05	09/12/25 9:09	msp
Mercury by Direct Combustion AA	EPA 7473	1	12.8		*	ng/g	2.19	10.95	08/22/25 15:13	rjw
Nickel, total (3050)	EPA 6010D	101	4.53			mg/Kg	0.808	4.04	09/11/25 0:46	wtc
Selenium, total (3050)	EPA 6020B	505	0.312			mg/Kg	0.0505	0.126	09/14/25 20:25	jrj
Silver, total (3050)	EPA 6020B	505	0.125	B	*	mg/Kg	0.0505	0.253	09/14/25 20:25	jrj
Zinc, total (3050)	EPA 6010D	101	77.0			mg/Kg	2.02	5.05	09/12/25 9:09	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	21.1		*	%	0.1	0.5	09/09/25 5:00	grw
Solids, Percent	D2216-80	1	78.9		*	%	0.1	0.5	09/09/25 5:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:07	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 12:08	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 12:08	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 9:02	jsa

Cantango Ore
Project ID:
Sample ID: KONA SED 3

ACZ Sample ID: ***L96628-07***
Date Sampled: *08/02/25 15:45*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20200	30100		*	mg/Kg	101	303	09/18/25 12:35	aps
Arsenic, total (3050)	EPA 6020B	505	4.70		*	mg/Kg	0.101	0.505	09/14/25 20:27	jrj
Cadmium, total (3050)	EPA 6020B	505	0.461		*	mg/Kg	0.0253	0.126	09/14/25 20:27	jrj
Copper, total (3050)	EPA 6020B	505	28.3			mg/Kg	0.404	1.01	09/14/25 20:27	jrj
Iron, total (3050)	EPA 6010D	101	22500		*	mg/Kg	6.06	15.2	09/12/25 9:13	msp
Lead, total (3050)	EPA 6020B	505	6.24			mg/Kg	0.0505	0.253	09/14/25 20:27	jrj
Manganese, total (3050)	EPA 6010D	101	461		*	mg/Kg	1.01	5.05	09/12/25 9:13	msp
Mercury by Direct Combustion AA	EPA 7473	1	24		*	ng/g	1.91	9.55	08/22/25 15:28	rjw
Nickel, total (3050)	EPA 6010D	101	4.56			mg/Kg	0.808	4.04	09/11/25 0:49	wtc
Selenium, total (3050)	EPA 6020B	505	0.214			mg/Kg	0.0505	0.126	09/14/25 20:27	jrj
Silver, total (3050)	EPA 6020B	505	0.0758	B	*	mg/Kg	0.0505	0.253	09/14/25 20:27	jrj
Zinc, total (3050)	EPA 6010D	101	76.8			mg/Kg	2.02	5.05	09/12/25 9:13	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	17.1		*	%	0.1	0.5	09/09/25 6:00	grw
Solids, Percent	D2216-80	1	82.9		*	%	0.1	0.5	09/09/25 6:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:10	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 12:24	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 12:24	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 9:06	jsa

Cantango Ore
Project ID:
Sample ID: KONA SED 4

ACZ Sample ID: ***L96628-08***
Date Sampled: *08/02/25 15:50*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	28300		*	mg/Kg	100	300	09/18/25 12:37	aps
Arsenic, total (3050)	EPA 6020B	500	4.19		*	mg/Kg	0.1	0.5	09/14/25 20:29	jrj
Cadmium, total (3050)	EPA 6020B	500	0.425		*	mg/Kg	0.025	0.125	09/14/25 20:29	jrj
Copper, total (3050)	EPA 6020B	500	22.7			mg/Kg	0.4	1	09/14/25 20:29	jrj
Iron, total (3050)	EPA 6010D	100	23800		*	mg/Kg	6	15	09/12/25 9:17	msp
Lead, total (3050)	EPA 6020B	500	5.31			mg/Kg	0.05	0.25	09/14/25 20:29	jrj
Manganese, total (3050)	EPA 6010D	100	409		*	mg/Kg	1	5	09/12/25 9:17	msp
Mercury by Direct Combustion AA	EPA 7473	1	19.1		*	ng/g	1.9	9.5	08/22/25 15:37	rjw
Nickel, total (3050)	EPA 6010D	100	4.45			mg/Kg	0.8	4	09/11/25 0:51	wtc
Selenium, total (3050)	EPA 6020B	500	0.299			mg/Kg	0.05	0.125	09/14/25 20:29	jrj
Silver, total (3050)	EPA 6020B	500	0.0759	B	*	mg/Kg	0.05	0.25	09/14/25 20:29	jrj
Zinc, total (3050)	EPA 6010D	100	69.7			mg/Kg	2	5	09/12/25 9:17	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	25.8		*	%	0.1	0.5	09/09/25 7:00	grw
Solids, Percent	D2216-80	1	74.2		*	%	0.1	0.5	09/09/25 7:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:12	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 12:39	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 12:39	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 9:09	jsa

Cantango Ore
Project ID:
Sample ID: KONA SED 5

ACZ Sample ID: ***L96628-09***
Date Sampled: *08/02/25 15:55*
Date Received: *08/14/25*
Sample Matrix: *Sediment*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total (3050)	EPA 6020B	20000	32900		*	mg/Kg	100	300	09/18/25 12:39	aps
Arsenic, total (3050)	EPA 6020B	500	3.95		*	mg/Kg	0.1	0.5	09/14/25 20:31	jrj
Cadmium, total (3050)	EPA 6020B	500	0.495		*	mg/Kg	0.025	0.125	09/14/25 20:31	jrj
Copper, total (3050)	EPA 6020B	500	23.1			mg/Kg	0.4	1	09/14/25 20:31	jrj
Iron, total (3050)	EPA 6010D	100	23000		*	mg/Kg	6	15	09/12/25 9:21	msp
Lead, total (3050)	EPA 6020B	500	5.39			mg/Kg	0.05	0.25	09/14/25 20:31	jrj
Manganese, total (3050)	EPA 6010D	100	403		*	mg/Kg	1	5	09/12/25 9:21	msp
Mercury by Direct Combustion AA	EPA 7473	1	50.8		*	ng/g	2.13	10.65	08/22/25 15:45	rjw
Nickel, total (3050)	EPA 6010D	100	3.88	B		mg/Kg	0.8	4	09/11/25 0:53	wtc
Selenium, total (3050)	EPA 6020B	500	0.213			mg/Kg	0.05	0.125	09/14/25 20:31	jrj
Silver, total (3050)	EPA 6020B	500	0.0741	B	*	mg/Kg	0.05	0.25	09/14/25 20:31	jrj
Zinc, total (3050)	EPA 6010D	100	68.6			mg/Kg	2	5	09/12/25 9:21	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Moisture Content	D2216-80	1	22.9		*	%	0.1	0.5	09/09/25 9:00	grw
Solids, Percent	D2216-80	1	77.1		*	%	0.1	0.5	09/09/25 9:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								08/25/25 9:15	crk
Digestion - Hot Plate	EPA 3050B								09/08/25 12:55	grw
Digestion - Hot Plate	EPA 3050B								09/08/25 12:55	grw
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								08/28/25 9:13	jsa

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

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ACZ Project ID: ***L96628***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Aluminum, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG620130													
WG620130ICV	ICV	09/18/25 11:51	MS250911-3	.1		.0981	mg/L	98	90	110			
WG620130ICB	ICB	09/18/25 11:54				U	mg/L		-0.015	0.015			
WG619295PBS	PBS	09/18/25 12:06				3.7315	mg/Kg		-7.5	7.5			
WG619295LCSS	LCSS	09/18/25 12:08	PCN629034	6840		8151.5561	mg/Kg		3640	10000			
WG619295LCSSD	LCSSD	09/18/25 12:10	PCN629034	6840		7515.8412	mg/Kg		3640	10000	8	20	
L96546-02MS	MS	09/18/25 12:14	MS250616-4	25.277775	7120	7171.0082	mg/Kg	202	75	125			M3
L96546-02MSD	MSD	09/18/25 12:16	MS250616-4	25.277775	7120	7023.4333	mg/Kg	-382	75	125	2	20	M3

Arsenic, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.05		.05098	mg/L	102	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.0006	0.0006			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-0.3	0.3			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	148		155.62051	mg/Kg		120	177			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	148		146.37104	mg/Kg		120	177	6	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	25.3005	4.88	29.70372	mg/Kg	98	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	25.3005	4.88	29.65567	mg/Kg	98	75	125	0	20	

Cadmium, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.05		.051149	mg/L	102	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.00015	0.00015			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-0.075	0.075			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	190		201.976906	mg/Kg		156	225			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	190		181.127757	mg/Kg		156	225	11	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	25.27525	1.12	25.431016	mg/Kg	96	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	25.27525	1.12	25.234328	mg/Kg	95	75	125	1	20	

Copper, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.05		.05461	mg/L	109	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.0024	0.0024			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-1.2	1.2			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	234		260.28146	mg/Kg		194	275			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	234		237.46556	mg/Kg		194	275	9	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	25.27525	8.57	33.36356	mg/Kg	98	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	25.27525	8.57	32.55648	mg/Kg	95	75	125	2	20	

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ACZ Project ID: ***L96628***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Iron, total (3050) EPA 6010D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619648													
WG619648ICV	ICV	09/12/25 7:29	II250906-1	2		1.899	mg/L	95	90	110			
WG619648ICB	ICB	09/12/25 7:33				U	mg/L		-0.18	0.18			
WG619295PBS	PBS	09/12/25 7:57				U	mg/Kg		-18	18			
WG619295LCSS	LCSS	09/12/25 8:01	PCN629034	6830		7127	mg/Kg		4080	9590			
WG619295LCSSD	LCSSD	09/12/25 8:05	PCN629034	6830		6618	mg/Kg		4080	9590	7	20	
L96546-01MS	MS	09/12/25 8:17	II250902-3	102.306	16300	18278.4	mg/Kg	1934	75	125			M3
L96546-01MSD	MSD	09/12/25 8:21	II250902-3	102.306	16300	18553.8	mg/Kg	2203	75	125	1	20	M3

Lead, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.05		.0512	mg/L	102	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.0003	0.0003			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-0.15	0.15			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	98.6		97.14023	mg/Kg		80.7	116			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	98.6		93.41746	mg/Kg		80.7	116	4	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	25.27525	8.81	33.28043	mg/Kg	97	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	25.27525	8.81	33.13195	mg/Kg	96	75	125	0	20	

Manganese, total (3050) EPA 6010D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619648													
WG619648ICV	ICV	09/12/25 7:29	II250906-1	2		1.949	mg/L	97	90	110			
WG619648ICB	ICB	09/12/25 7:33				U	mg/L		-0.03	0.03			
WG619295PBS	PBS	09/12/25 7:57				U	mg/Kg		-3	3			
WG619295LCSS	LCSS	09/12/25 8:01	PCN629034	244		253.9	mg/Kg		197	291			
WG619295LCSSD	LCSSD	09/12/25 8:05	PCN629034	244		269	mg/Kg		197	291	6	20	
L96546-01MS	MS	09/12/25 8:17	II250902-3	51.408	259	302.022	mg/Kg	84	75	125			
L96546-01MSD	MSD	09/12/25 8:21	II250902-3	51.408	259	307.02	mg/Kg	93	75	125	2	20	

Mercury by Direct Combustion AA EPA 7473

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG615986													
WG615986ICV1	ICV	07/22/25 12:09	HG250707-3	100		99.3	ng/g	99	90	110			
WG615986ICV2	ICV	07/22/25 12:16	HG250707-3	100		102	ng/g	102	90	110			
WG615986ICV3	ICV	07/22/25 12:23	HG250707-2	1000		970	ng/g	97	90	110			
WG615986ICV4	ICV	07/22/25 12:30	HG250707-4	10000		9770	ng/g	98	90	110			
WG618067													
WG618067ICV1	ICV	08/22/25 11:08	HG250707-3	100		99.6	ng/g	100	90	110			
WG618067ICV2	ICV	08/22/25 11:15	HG250707-3	100		97.5	ng/g	98	90	110			
WG618067ICV3	ICV	08/22/25 11:22	HG250707-2	1000		962	ng/g	96	90	110			
WG618067ICV4	ICV	08/22/25 11:29	HG250707-4	10000		10000	ng/g	100	90	110			
WG618067PBS	PBS	08/22/25 12:25				U	ng/g		-7.02	7.02			
WG618067LCSS	LCSS	08/22/25 12:41	PCN627355	90		86.9	ng/g		80	120			
WG618067LCSSD	LCSSD	08/22/25 12:49	PCN627355	90		75	ng/g		80	120	15	20	
L96514-01MS	MS	08/22/25 13:06	HG250707-2				ng/g	94	80	120			
L96514-03DUP	DUP	08/22/25 13:30			U	U	ng/g				0	20	RA

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ACZ Project ID: ***L96628***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Moisture Content D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619343													
L96628-08DUP	DUP	09/09/25 8:00			25.8	26.7	%				3	20	

Nickel, total (3050) EPA 6010D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619476													
WG619476ICV	ICV	09/10/25 23:49	II250906-1	2.004		2.02	mg/L	101	90	110			
WG619476ICB	ICB	09/10/25 23:52				U	mg/L		-0.024	0.024			
WG619295PBS	PBS	09/11/25 0:05				U	mg/Kg		-2.4	2.4			
WG619295LCSS	LCSS	09/11/25 0:08	PCN629034	155		173	mg/Kg		127	183			
WG619295LCSSD	LCSSD	09/11/25 0:10	PCN629034	155		153	mg/Kg		127	183	12	20	
L96546-01MS	MS	09/11/25 0:17	II250902-3	51	23.1	64.158	mg/Kg	81	75	125			
L96546-01MSD	MSD	09/11/25 0:19	II250902-3	51	23.1	66.096	mg/Kg	84	75	125	3	20	

Selenium, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.05		.05072	mg/L	101	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.0003	0.0003			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-0.15	0.15			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	124		130.72786	mg/Kg		97.3	150			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	124		119.8102	mg/Kg		97.3	150	9	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	12.637625	1.69	13.80175	mg/Kg	96	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	12.637625	1.69	13.88096	mg/Kg	96	75	125	1	20	

Silver, total (3050) EPA 6020B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619730													
WG619730ICV	ICV	09/14/25 19:29	MS250615-4	.02		.02125	mg/L	106	90	110			
WG619730ICB	ICB	09/14/25 19:30				U	mg/L		-0.0003	0.0003			
WG619295PBS	PBS	09/14/25 19:40				U	mg/Kg		-0.15	0.15			
WG619295LCSS	LCSS	09/14/25 19:42	PCN629034	54.9		54.18345	mg/Kg		43.6	66.3			
WG619295LCSSD	LCSSD	09/14/25 19:44	PCN629034	54.9		51.5283	mg/Kg		43.6	66.3	5	20	
L96546-02MS	MS	09/14/25 19:49	MS250616-4	5.05	.0949	5.03736	mg/Kg	98	75	125			
L96546-02MSD	MSD	09/14/25 19:51	MS250616-4	5.05	.0949	5.0727	mg/Kg	99	75	125	1	20	

Solids, Percent D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619343													
WG619343PBS	PBS	09/08/25 12:00				U	%		-0.1	0.1			
L96628-08DUP	DUP	09/09/25 8:00			74.2	73.3	%				1	20	

HIGHGOLDMINING

ACZ Project ID: ***L96628***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, total (3050) EPA 6010D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG619648													
WG619648ICV	ICV	09/12/25 7:29	II250906-1	2		2.01	mg/L	101	90	110			
WG619648ICB	ICB	09/12/25 7:33				U	mg/L		-0.06	0.06			
WG619295PBS	PBS	09/12/25 7:57				U	mg/Kg		-6	6			
WG619295LCSS	LCSS	09/12/25 8:01	PCN629034	345		398.9	mg/Kg		274	416			
WG619295LCSSD	LCSSD	09/12/25 8:05	PCN629034	345		361.1	mg/Kg		274	416	10	20	
L96546-01MS	MS	09/12/25 8:17	II250902-3	51.051	97.8	150.042	mg/Kg	102	75	125			
L96546-01MSD	MSD	09/12/25 8:21	II250902-3	51.051	97.8	152.082	mg/Kg	106	75	125	1	20	

Cantango Ore ACZ Project ID: ***L96628***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96628-01	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-02	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-03	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Cantango Ore ACZ Project ID: ***L96628***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96628-04	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-05	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-06	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Cantango Ore ACZ Project ID: ***L96628***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96628-07	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-08	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L96628-09	WG620130	Aluminum, total (3050)	EPA 6020B	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG619730	Arsenic, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Cadmium, total (3050)	EPA 6020B	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG619648	Iron, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
		Manganese, total (3050)	EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.
	WG618067	Mercury by Direct Combustion AA	EPA 7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Cantango Ore

ACZ Project ID: ***L96628***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Silver, total (3050)	EPA 6020B

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Moisture Content	D2216-80
Solids, Percent	D2216-80

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Cantango Ore

ACZ Project ID: L96628
Date Received: 08/14/2025 15:45
Received By:
Date Printed: 8/15/2025

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody form or other directive shipping papers present?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
5) If samples are received past hold time, proceed with requested short hold time analyses?	X		
6) Is the Chain of Custody form complete and accurate?	X		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?		X	

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

SAMPLE #7 (SX ID: KONA SED 2) RECEIVED SHATTERED, SAMPLE COULD NOT BE RECOVERED, REMOVED FROM PROJECT. SAMPLE #8 (SX ID: KONA SED 3) RECEIVED WITH SEMI-SHATTERED JAR, WHOLE SAMPLE TRANSFERRED TO PLASTIC BAG.

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
NA45906	5.3	<=6.0	15	N/A

Ice Present? Yes - Gel ice was present in the shipment container(s).

Was this a domestic shipment?

Yes - This is a domestic shipment.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Cantango Ore

ACZ Project ID: L96628
Date Received: 08/14/2025 15:45
Received By:
Date Printed: 8/15/2025

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

[1] The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L96628

CHAIN of CUSTODY

Report to:

Name: Allegra Cairns	Address: 405-375 Water Street West
Company: Contango Ore	Vancouver, BC Canada V6B 5C6
E-mail: acairns@contangoore.com	Telephone: 604-629-1165

Copy of Report to:

Name: Josh Brekken	E-mail: josh.brekken@alaska.gov
Company: Alaska Dept. of Fish and Game	Telephone: 907-267-2113

Invoice to:

Name: Allegra Cairns	Address: 405-375 Water Street West
Company: Contango Ore	Vancouver, BC Canada V6B 5C6
E-mail: acairns@contangoore.com	Telephone: 604-629-1165

Copy of Invoice to:

Name:	Address:
Company:	
E-mail:	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✓

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Josh Brekken **Sampler's Site Information** **State** Alaska **Zip code** 99518 **Time Zone** AKDT

***Sampler's Signature:** Josh Brekken Digitally signed by Josh Brekken Date: 2025.08.12 09:15:16 -08'00'

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#:

Reporting state for compliance testing: not for compliance testing (AK)

Check box if samples include NRC licensed material?

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals	(Al, As, Cd, Cu, Fe, Pb, Hg, Se, Ag, Zn)							
Johnson Sed 1	8/2/2025 13:30	SO	1	✓								
Johnson Sed 2	8/2/2025 13:35	SO	1	✓								
Johnson Sed 3	8/2/2025 13:40	SO	1	✓								
Johnson Sed 4	8/2/2025 13:45	SO	1	✓								
Johnson Sed 5	8/2/2025 13:50	SO	1	✓								
Kona Sed 1	8/2/2025 15:35	SO	1	✓								
Kona Sed 2	8/2/2025 15:40	SO	1	✓								
Kona Sed 3	8/2/2025 15:45	SO	1	✓								
Kona Sed 4	8/2/2025 15:50	SO	1	✓								
Kona Sed 5	8/2/2025 15:55	SO	1	✓								

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Samples are sediment grab samples from Upper Johnson River and Kona Creek sites. Metals analysis for sediment samples should include: Ag, Al, As, Cd, Cu, Fe, Hg, Pb, Se, and Zn

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Josh Brekken Digitally signed by Josh Brekken Date: 2025.08.12 09:15:16 -08'00'	8/12/2025		8/14/25 10:00

Qualtrax ID: 1984 Revision #: 2 White - Return with sample. Yellow - Retain for your records.

APPENDIX E. MINNOW TRAPPING RESULTS AND FISH CONDITION, JOHNSON TRACT 2024

CPUE - Upper Johnson - 2024

Stream	Trap ID	Set Date	Set Time	Pick Date	Pick Time	Total Time Fished (hours)	DV	CPUE[1]
Upper Johnson	1.1	8/12/2024	14:15	8/13/2024	9:15	19.00	0	0.00
Upper Johnson	1.2	8/12/2024	14:20	8/13/2024	9:18	18.98	0	0.00
Upper Johnson	1.3	8/12/2024	14:25	8/13/2024	9:20	18.92	0	0.00
Upper Johnson	1.4	8/12/2024	14:30	8/13/2024	9:26	18.10	0	0.00
Upper Johnson	1.5	8/12/2024	14:45	8/13/2024	9:30	18.75	0	0.00
Upper Johnson	1.6	8/12/2024	14:55	8/13/2024	9:36	18.68	1	1.28
Upper Johnson	1.7	8/12/2024	14:55	8/13/2024	9:45	18.83	3	3.82
Upper Johnson	1.8	8/12/2024	15:00	8/13/2024	9:59	18.98	3	3.79
Upper Johnson	2.1	8/13/2024	17:17	8/14/2024	13:16	19.98	1	1.20
Upper Johnson	2.2	8/13/2024	17:20	8/14/2024	13:20	20.00	0	0.00
Upper Johnson	2.3	8/13/2024	17:24	8/14/2024	13:27	20.05	4	4.79
Upper Johnson	2.4	8/13/2024	17:27	8/14/2024	13:33	20.10	0	0.00
Upper Johnson	2.5	8/13/2024	17:30	8/14/2024	13:36	20.10	4	4.78
Upper Johnson	2.6	8/13/2024	17:40	8/14/2024	13:49	20.15	1	1.19
Upper Johnson	2.7	8/13/2024	17:46	8/14/2024	13:53	20.12	8	9.54
Upper Johnson	2.8	8/13/2024	17:50	8/14/2024	14:06	20.27	10	11.84
Upper Johnson	2.9	8/13/2024	17:52	8/14/2024	14:20	20.47	1	1.17
Upper Johnson	2.10	8/13/2024	17:55	8/14/2024	14:23	20.47	3	3.52
					TOTAL	351.95	39	
					AVG	19.55	2.17	**2.61**

NOTE: Traps 1.1 to 1.8 were set in the mainstem of the Johnson River and Traps 2.1 to 2.10 were set just downstream of monitoring reach in a side channel
Trap ID number represents Day and Trap (e.g., Trap 1.8 is the 8th trap set on the 1st day and Trap 2.8 is the 8th trap set on the 2nd day).
[1] – Normalized to 24 hours

CPUE - Kona Creek - 2024

Site	Trap ID	Set Date	Set Time	Pick Date	Pick Time	Total Time Fished (hours)	DV	CPUE[1]
Kona Creek	1.1	8/12/2024	15:35	8/13/2024	13:30	21.92	0	0.00
Kona Creek	1.2	8/12/2024	15:40	8/13/2024	13:35	21.92	1	1.10
Kona Creek	1.3	8/12/2024	15:45	8/13/2024	13:41	21.93	3	3.28
Kona Creek	1.4	8/12/2024	15:50	8/13/2024	13:51	22.02	0	0.00
Kona Creek	1.5	8/12/2024	15:55	8/13/2024	13:55	22.00	1	1.09
Kona Creek	1.6	8/12/2024	16:00	8/13/2024	13:57	21.95	0	0.00
Kona Creek	1.7	8/12/2024	16:05	8/13/2024	14:05	22.00	7	7.64
Kona Creek	1.8	8/12/2024	16:10	8/13/2024	14:10	22.00	2	2.18
					TOTAL	175.73	14	
					AVG	21.97	1.75	**1.91**

NOTE: Trap ID number represents Day and Trap (e.g., Trap 1.8 is the 8th trap set on the 1st day and Trap 2.8 is the 8th trap set on the 2nd day).

[1] – Normalized to 24 hours

Fish Condition - Upper Johnson - 2024

Fish ID	Weight (g)	Length (FL in mm)	L^3	K
1.6-1	16.60	127	2048383	0.8104
1.7-1	9.60	109	1295029	0.7413
1.7-2	3.10	80	512000	0.6055
1.7-3	2.10	61	226981	0.9252
1.8-1	15.30	125	1953125	0.7834
1.8-2	3.90	76	438976	0.8884
1.8-3	3.80	77	456533	0.8324
2.1-1	15.30	115	1520875	1.0060
2.3-1	13.90	115	1520875	0.9139
2.3-2	17.80	121	1771561	1.0048
2.3-3	9.30	96	884736	1.0512
2.3-4	4.60	71	357911	1.2852
2.5-1	11.11	107	1225043	0.9069
2.5-2	13.70	115	1520875	0.9008
2.5-3	14.50	112	1404928	1.0321
2.5-4	9.10	100	1000000	0.9100
2.6-1	6.70	83	571787	1.1718
2.7-1	3.70	68	314432	1.1767
2.7-2	12.10	110	1331000	0.9091
2.7-3	10.70	98	941192	1.1369
2.7-4	4.20	65	274625	1.5294
2.7-5	5.60	83	571787	0.9794
2.7-6	4.20	68	314432	1.3357
2.7-7	4.20	68	314432	1.3357
2.7-8	14.90	110	1331000	1.1195
2.8-1	6.20	83	571787	1.0843
2.8-2	13.30	113	1442897	0.9218
2.8-3	18.80	117	1601613	1.1738
2.8-4	8.80	97	912673	0.9642
2.8-5	19.50	128	2097152	0.9298
2.8-6	16.00	126	2000376	0.7998
2.8-7	14.70	115	1520875	0.9665
2.8-8	14.50	116	1560896	0.9290
2.8-9	30.20	145	3048625	0.9906

Fish Condition - Upper Johnson - 2024

Fish ID	Weight (g)	Length (FL in mm)	L^3	K
2.8-10	15.90	109	1295029	1.2278
2.9-1	12.50	110	1331000	0.9391
2.10-1	10.50	103	1092727	0.9609
2.10-2	15.20	120	1728000	0.8796
2.10-3	14.10	116	1560896	0.9033
AVERAGE	**11.3**	**101.5**		**0.9990**

Note: Fish ID number represents Day and Trap followed by order fish were processed (e.g., Fish 1.8-2 is the 2nd fish processed from the 8th trap set on the 1st day and Fish 2.8-2 is the 2nd fish process from the 8th trap set on the 2nd day).

All fish captures are Dolly Varden

Fish Condition - Kona Creek - 2024				
Fish ID	Weight (g)	Length (FL in mm)	L3	K
1.2-1	17.60	120	1728000	1.0185
1.3-1	17.90	121	1771561	1.0104
1.3-2	17.30	121	1771561	0.9765
1.3-3	11.20	113	1442897	0.7762
1.5-1	34.90	147	3176523	1.0987
1.7-1	18.90	124	1906624	0.9913
1.7-2	25.40	142	2863288	0.8871
1.7-3	8.20	100	1000000	0.8200
1.7-4	4.80	80	512000	0.9375
1.7-5	7.20	80	512000	1.4063
1.7-6	3.70	85	614125	0.6025
1.7-7	3.80	76	438976	0.8657
1.8-1	12.00	110	1331000	0.9016
1.8-2	16.90	122	1815848	0.9307
AVERAGE	**14.3**	**110.1**		**0.9445**

Note: Fish ID number represents Day and Trap followed by order fish were processed (e.g., Fish 1.8-2 is the 2nd fish processed from the 8th trap set on the 1st day and Fish 2.8-2 is the 2nd fish process from the 8th trap set on the 2nd day).

All fish captures are Dolly Varden

2025

CPUE - Upper Johnson - 2025

Site	Trap ID	Set Date	Set Time	Pick Date	Pick Time	Total Time Fished (hours)	DV	CPUE[2]
Upper Johnson	1.1	8/2/25	11:25	8/3/25	8:50	21.42	1	1.12
Upper Johnson	1.2	8/2/25	11:25	8/3/25	8:54	21.48	0	0.00
Upper Johnson	1.3	8/2/25	11:26	8/3/25	8:55	21.48	1	1.12
Upper Johnson	1.4	8/2/25	11:31	8/3/25	9:05	21.57	2	2.23
Upper Johnson	1.5	8/2/25	11:31	8/3/25	9:09	21.63	4	4.44
Upper Johnson	1.6	8/2/25	11:36	8/3/25	9:15	21.65	3	3.33
Upper Johnson	1.7	8/2/25	11:43	8/3/25	9:22	21.65	1	1.11
Upper Johnson	1.8	8/2/25	11:48	8/3/25	9:28	21.67	0	0.00
Upper Johnson	1.9	8/2/25	11:56	8/3/25	9:37	21.68	0	0.00
Upper Johnson	1.10	8/2/25	12:02	8/3/25	9:40	21.63	0	0.00
Upper Johnson	2.1	8/3/25	11:20	8/4/25	9:35	22.25	2	2.16
Upper Johnson	2.2	8/3/25	11:19	8/4/25	9:41	22.37	2	2.15
Upper Johnson	2.3	8/3/25	11:03	8/4/25	9:48	22.75	0	0.00
Upper Johnson	2.4	8/3/25	11:09	8/4/25	9:51	22.70	2	2.11
Upper Johnson	2.5	8/3/25	11:00	8/4/25	9:57	22.95	0	0.00
Upper Johnson	2.6	8/3/25	10:59	8/4/25	9:59	23.00	0	0.00
Upper Johnson	2.7	8/3/25	10:56	8/4/25	10:02	23.10	0	0.00
Upper Johnson	2.8	8/3/25	10:54	8/4/25	10:06	23.20	19[1]	19.66
Upper Johnson	2.9	8/3/25	10:47	8/4/25	10:28	23.68	3	3.04
Upper Johnson	2.10	8/3/25	10:50	8/4/25	10:39	23.82	1	1.01
					TOTAL	445.68	41[1]	
					AVG	22.28	2.05	**2.21**

NOTE: Trap ID number represents Day and Trap (e.g., Trap 1.8 is the 8th trap set on the 1st day and Trap 2.8 is the 8th trap set on the 2nd day).

[1] – Includes one juvenile coho salmon

[2] – Normalized to 24 hours

CPUE - Kona Creek - 2025

Site	Trap ID	Set Date	Set Time	Pick Date	Pick Time	Total Time Fished (hours)	DV	CPUE[2]
Kona Creek	1.1	8/2/25	12:20	8/3/25	11:56	23.60	2	
Kona Creek	1.2	8/2/25	12:26	8/3/25	12:01	23.58	1	
Kona Creek	1.3	8/2/25	12:29	8/3/25	12:09	23.67	1	
Kona Creek	1.4	8/2/25	12:45	8/3/25	12:11	23.43	0	
Kona Creek	1.5	8/2/25	12:45	8/3/25	12:12	23.45	1	
Kona Creek	1.6	8/2/25	12:27	8/3/25	12:17	23.83	0	
Kona Creek	1.7	8/2/25	12:50	8/3/25	12:19	23.48	0	
Kona Creek	1.8	8/2/25	12:55	8/3/25	12:21	23.43	0	
Kona Creek	1.9	8/2/25	13:00	8/3/25	12:25	23.42	1	
Kona Creek	1.10	8/2/25	13:05	8/3/25	12:29	23.40	1	
Kona Creek	2.1	8/3/25	12:50	8/4/25	[1]			
Kona Creek	2.2	8/3/25	12:54	8/4/25	[1]			
Kona Creek	2.3	8/3/25	12:55	8/4/25	10:50	21.92	0	0.00
Kona Creek	2.4	8/3/25	13:01	8/4/25	[1]			
Kona Creek	2.5	8/3/25	13:03	8/4/25	[1]			
Kona Creek	2.6	8/3/25	13:04	8/4/25	11:09[1]	22.08	0	0.00
Kona Creek	2.7	8/3/25	13:05	8/4/25	11:11	22.10	1	1.09
Kona Creek	2.8	8/3/25	13:07	8/4/25	11:13	22.10	0	0.00
Kona Creek	2.9	8/3/25	13:09	8/4/25	[1]			
Kona Creek	2.10	8/3/25	13:10	8/4/25	[1]			
					TOTAL	201.70	8	
					AVG	23.12	0.57	**0.59**

NOTE: Trap ID number represents Day and Trap (e.g., Trap 1.8 is the 8th trap set on the 1st day and Trap 2.8 is the 8th trap set on the 2nd day).

[1] – Trap missing, destroyed, or compromised by bear

[2] – Normalized to 24 hours

Fish Condition - Upper Johnson - 2025

Fish ID	Weight (g)	Length (FL in mm)	L^3	K
1.1-1	4.50	73	389017	1.1568
1.3-1	11.50	109	1295029	0.8880
1.4-1	24.70	137	2571353	0.9606
1.4-2	13.50	113	1442897	0.9356
1.5-1	4.80	83	571787	0.8395
1.5-2	3.00	68	314432	0.9541
1.5-3	1.40	43	79507	1.7609
1.5-4	14.50	114	1481544	0.9787
1.6-1	8.20	105	1157625	0.7083
1.6-2	5.10	85	614125	0.8304
1.6-3	2.90	61	226981	1.2776
1.7-1	11.60	109	1295029	0.8957
2.1-1	2.10	66	287496	0.7304
2.1-2	7.70	89	704969	1.0922
2.2-1	1.00	54	157464	0.6351
2.2-2	1.00	54	157464	0.6351
2.4-1	4.30	108	1259712	0.3413
2.4-2	2.60	64	262144	0.9918
2.8-1	1.00	57	185193	0.5400
2.8-2	2.50	49	117649	2.1250
2.8-3	6.90	88	681472	1.0125
2.8-4	5.10	75	421875	1.2089
2.8-5	6.00	85	614125	0.9770
2.8-6[1]	3.90	65	274625	1.4201
2.8-7	1.50	55	166375	0.9016
2.8-8	5.70	91	753571	0.7564
2.8-9	5.30	79	493039	1.0750
2.8-10	1.50	50	125000	1.2000
2.8-11	6.80	90	729000	0.9328
2.8-12	4.10	66	287496	1.4261
2.8-13	2.09	55	166375	1.2562
2.8-14	2.30	58	195112	1.1788
2.8-15	5.40	77	456533	1.1828
2.8-16	2.09	51	132651	1.5756
2.8-17	2.00	57	185193	1.0800
2.8-18	2.50	62	238328	1.0490
2.8-19	2.00	55	166375	1.2021
2.9-1	4.50	58	195112	2.3064
2.9-2	2.00	50	125000	1.6000
2.9-3	4.40	80	512000	0.8594
2.9-4	5.00	66	287496	1.7392
AVERAGE	**5.10**	**74.49**	**531174.88**	**1.1029**

NOTE: Fish ID number represents Day and Trap followed by order fish were processed (e.g., Fish 1.8-2 is the 2nd fish processed from the 8th trap set on the 1st day and Fish 2.8-2 is the 2nd fish process from the 8th trap set on the 2nd day).

[1] Juvenile coho salmon, all other fish captures are Dolly Varden

Fish Condition - Kona Creek - 2025				
Fish ID	Weight (g)	Length (FL in mm)	L3	K
1.1-1	12.50	106	1191016	1.0495
1.1-2	19.50	129	2146689	0.9084
1.2-1	18.30	130	2197000	0.8330
1.3-1	12.10	109	1295029	0.9343
1.5-1	18.20	130	2197000	0.8284
1.9-1	21.30	138	2628072	0.8105
1.10-1	17.60	119	1685159	1.0444
2.7-1	12.50	105	1157625	1.0798
AVERAGE	**16.5000**	**120.7500**		**0.9360**

Note: Fish ID number represents Day and Trap followed by order fish were processed (e.g., Fish 1.8-2 is the 2nd fish processed from the 8th trap set on the 1st day and Fish 2.8-2 is the 2nd fish process from the 8th trap set on the 2nd day).

All fish captures are Dolly Varden