

Department of Environmental Conservation

DIVISION of Water Juneau

410 Willoughby Ave Juneau, AK 99801 Main: 907.269.6285 Fax: 907.334.2415 www.dec.alaska.gov

3/21/2024

Daniel Bleidorn
Lands and Resources Manager
City and Borough of Juneau
155 S SEWARD ST
Juneau, AK 99801
Dan.Bleidorn@juneau.gov

SUBJECT: APDES Inspection of the A.J. Mine, Individual Permit AK0049514.

Dear City and Borough of Juneau:

Per the Alaska Pollutant Discharge Elimination System, an inspection of the A.J. Mine was conducted on February 28, 2024. We would like to provide you with a copy of the inspection report for your records. Thank you for your cooperation and assistance regarding this inspection and for your efforts in protecting human health and the environment.

Sincerely,

Jon Wendel, Compliance and Enforcement Program Manager

Credential No. R-0317

Check One:

(X) Emailed

() Sent by Certified Mail

on the 21 day of March, 2024

cc:

DEC.Water.APDESData@alaska.gov Jon Wendel, DEC



APDES INSPECTION REPORT

Alaska Department of Environmental Conservation
Division of Water
410 Willoughby Avenue Ste. 303, Juneau, AK 99801

Responsible Party/Mailing Address:

Title: Lands and Resources Manager

Juneau, AK 99801

Email: Dan.Bleidorn@juneau.gov

Address: 155 S SEWARD ST

Company: City and Borough of Juneau

Name: Daniel Bleidorn

Phone: 586-5252 x4177

Section 1: General Data						
Permit Number	Announced / Unannounced	Receiving Waters	Inspection Date			
Number: AK0049514			Date: 2/28/2024 (onsite follow-up 3/21/2024)			
Effective: 4/1/2005	Announced	Gold Creek	Entry Time: 1:00			
Expiration: 3/31/2010			Exit Time: 3:00			

Section 2: Facility Data

Name of Facility: Alaska Juneau Mine

On-Site Representative/Physical Address:

Name: Daniel Bleidorn

Title: Lands and Resources Manager Company: City and Borough of Juneau

Address: 155 S SEWARD ST

Juneau. AK 99801

Phone: 586-5252 x4177

Email: Dan.Bleidorn@juneau.gov

Latitude/Longitude at the outfall (from Permit)

Outfall 001: 58.307222, -134.378056 Outfall 003: 58.308333, -134.383667 Outfall 005: 58.306944, -134.363889

For internal use only:

Off-Site Compliance Evaluation : ☐ Yes ☒No NAICS: 10410103 (Underground Gold Mining)

Additional Inspection Participants:

Kenneth O'Brien - DEC

Section 3: Findings

Background/Regulatory Status/Compliance History

The City and Borough of Juneau (CBJ or City) is authorization to discharge water from the Alaska Juneau (AJ) Mine per the National Pollutant Discharge Elimination System Individual Permit AK0049514. The permit was initially issued by the EPA on January 26th, 2005, and became effective on April 1, 2005. The permit expired on March 31, 2010, and was subsequently administratively extended pending the reissuance of the permit. In 2017, the permit was modified to comply with the EPA Electronic Reporting Rule which requires reporting of discharge monitoring reports through NetDMR. In 2010, regulatory oversight of the permit was transferred to DEC as part of the Departments assumption of the NPDES program, as outlined in the EPA approval of the APDES program.

The City is the operator of the mine; however, the AJ Mine is currently inactive and has been since the early 2000s when closure activities were completed. The only activities which will occur at the site during the

upcoming years are care and maintenance along with permit required sampling and monitoring. The site has three outfalls which all have unique monitoring requirements:

- The Gold Creek Drainage Tunnel (GCDT Outfall 001) discharge contains water which comes in
 contact with the historic mine workings intercepting infiltration and runoff from precipitation and snow
 melt. Flow is discharged from tunnel portal and is continuous, despite the fact that the source of the
 water is rainfall and snow melt, because the water has a long residence time in the mine workings prior
 to discharge.
- 2. The Ebner adit (Outfall 003) discharge contains water which comes in contact with the historic mine workings intercepting infiltration and runoff from precipitation and snow melt. The discharge from Outfall 003 is similar in many ways to Outfall 001, however, the flow from Outfall 003 is considerably lower than 001.
- 3. The "00" adit (Outfall 005) is a point source discharge to Gold Creek, however, this outfall is inaccessible and it is not possible to safely sample it (according to the EPA Fact Sheet). According to the 1998 BMP plan (Kvaerner, 1998), this discharge has existed since 1917 and has an established drainage channel, so there is minimal potential for erosion or water quality impacts. The water discharged from this outfall does not come into contact with the mine workings and flows only in response to precipitation events. Therefore, neither the previous permit nor the current permit contains monitoring requirements or effluent limitations for this outfall.

Receiving water monitoring is required at two locations (a third location, GCF was removed in the reissuance of the permit in 2005) and occurs annually between January 1 and May 31. GCB is located just downstream of Outfall 001, while station GCR is located just upstream of the discharge from Outfall 001 and downstream from Outfall 005. Monitoring results from the surface water monitoring from GCB and GCR are submitted annual with the annual report.

In Alaska, all waterbodies are protected for all designated uses, unless the water body has been specifically reclassified in Title 18 Alaska Administrative Code (AAC), Chapter 70.230(e) or a site-specific criterion is in effect. If a waterbody has been reclassified such that it is not expected to attain a particular designated use, the criteria intended to support that designated use do not apply to that waterbody. The most stringent statewide criterion which is applicable to a given waterbody will control, unless a site specific criterion is listed for the waterway in 18 AAC 70.236(b). Gold Creek has not been reclassified, but it has been given a site-specific criterion of 300 mg/L for total dissolved solids (TDS), which EPA approved on April 3, 1998. Therefore, the most stringent statewide criteria apply to Gold Creek, except for the site-specific TDS criterion.

This is the 12th inspection of the site. The Department of Environmental Conservation (DEC) conducted the first inspection of the site in 1990, however, the following 10 inspections were conducted by the EPA. The inspection covers the time period between January 1, 2019 and February 28th, 2024. This timeframe represents the entirety of time between the EPA inspection in 2018 and the date of the onsite 2024 DEC inspection where compliance activities would be required (between August 30, 2018 and January 1, 2019 it is unlikely that compliance activities occurred).

The compliance monitoring review and a review of Environmental Compliance History Online (ECHO) and Integrated Compliance Information System (ICIS) ECHO/ICIS has shown that this facility is not in significant noncompliance for the period of this evaluation.

Field Inspection

Upon arrival at the City offices, introductions were exchanged, and inspector credentials were presented.

The following information was provided verbally by onsite representatives and a records review was conducted:

- Dan Bleidorn has been with CBJ since 2009.
- Prior to coming to CBJ, Dan worked as a bench analysis at Analytical Alaska doing water quality sample analysis. Dan also worked in the field as needed.
- Dan has been the Lands and Resource Manager since 2020 and was present during the 2018 EPA inspection.
- Generally, the Lands and Resources Department manages lands not otherwise actively managed which
 includes current and previously permitted sites (such as the Pioneer Access Road (AKR10FS26) and
 CBJ rock quarries (AKR06AD61)).
- Dan enters analytical results into NetDMR and submits them.
- Dan also works periodically with other CBJ APDES permits such as the Multi Sector General Permit (MSGP) permits of the rock quarries.
- The Lands and Resource Department has two employees.
- The AJ Mine is currently inactive, and no exploration has occurred since the 2018 inspection (or since the issuance of the permit in 2005).
- There are no plans to reopen the mine for active mining or other uses, such as tourism, in the foreseeable future.
- Nearly all the mine is on property owned by CBJ, however, additional mine access points may exist on other privately owned properties, such as land owned by Alaska Electric Light and Power. A land survey was conducted in 2011, but that record was not available at the time of the inspection.
- Generally:
 - Outfall 001 drains the tunnels from the Mt. Roberts side of the AJ Mine. Of the two monitored outfalls, it has the highest flow.
 - Outfall 003 drains the tunnels from the Mt. Juneau side of the AJ Mine. Of the two monitored outfalls, it has the lowest flow.
 - o Both outfalls discharge continuously, but the flow from Outfall 003 is more seasonally impacted by precipitation and snow melt.
 - Outfall 005 is located high up on Mt. Roberts and was removed from the reissuance of the 2005 Permit by the EPA.
- The locations of the outfalls on the Individual Permit are accurate.
- The CBJ uses Admiralty Environmental (Admiralty), in Juneau, Alaska for sample analysis.
- CBJ and Admiralty typically conducted Outfall 001 and 003 monitoring during April/May.
- Mercury is required to be sampled three times annually, so sampling for mercury may occur in March depending on site access.
- Mercury sampling is conducted one to two weeks apart depending on the schedule (to complete monitoring by May 31st).
- Surface water monitoring (GCR and GCB) is conducted at the same time as Outfall monitoring.
- Flow monitoring on Outfall 001 is conducted using a flow gauge. Admiralty staff measure the flow while conducting Outfall 001 sampling by reading the water line on the side of the gauge which corresponds to a certain flow rate. That flow rate is then mathematically converted to million gallons per day (mgd).
- Flow monitoring from Outfall 003 is conducted using a five-gallon bucket and a stopwatch. The average time it takes to fill the bucked (five fills) is converted to a mgd.
- Flow is measured by putting the bucket below the outfall and filling it with discharging water (imagine filling a bucket with a garden hose).

• Surface water monitoring flow at GCB (downstream of Outfall 001) is measured using an instream flow meter and a calculated stream width/dept at various points.

- Surface water monitoring flow at GCR (upstream of Outfall 001) is calculated by subtracting the flow rate of Outfall 001 from the downstream surface water monitoring flow at GCB.
- Surface water flow monitoring is conducted on the same days as other surface water and outfall monitoring.
- The flow rates from the Outfalls and surface water monitoring locations does not show a trend either towards higher or lower flows.
- Flow monitoring is also taken during mercury sampling events.
- Admiralty conducts all monitoring (such as pH and other field parameters) and sampling requirements associated with the Individual Permit and also does all analytical analysis (or subcontracts it to other labs such as metals).
- Sampling at the Outfalls and surface water monitoring location has not been missed or conducted outside of January 1 through May 31st annually.
- No modifications to the BMP Plan or QAPP have occurred since the 2013 versions were finalized.
- The Great North mine workings are filling up with water and would eventually discharge through Outfall 003. It is unknown when this might take place.
- There have been no noncompliance events that would require reporting to the EPA or DEC.
- No known spills have occurred within the AJ Mine since at least 2019 (or during the review period of this inspection).

Due to the weather on the day of the inspection, snowing as well as the days prior, the site was likely under considerable snow load and an onsite observation of the outfalls was not conducted. Much of the site is located within an active avalanche shoot, and safety concerns were taken into consideration in the decision to forgo the field aspect of the inspection at the request of the City. However, the site was inspected by the EPA in 2018 during which an onsite inspection did occur. As no changes have been made to the site in any way since the 2018 inspection (which didn't identify any permit violations) it is probable that no additional violations exist onsite that would have been discovered through the field inspection portion of this inspection. A follow-up inspection was conducted on March 21, 2024, for a visual inspection of the area. During the onsite portion of the inspection on March 21st, the area was still under considerable snow load and the outfall were inaccessible.

The following information was obtained through a detailed review of onsite monitoring records (such as chain-of-custody forms) and information submitted on discharge monitoring reports:

AJ sampling					
	GCR	GCB	001	003	Mercury 3x
					4/22/2019
2019	4/22/2019	4/22/2019	4/22/2019	4/22/2019	4/29/2019
					5/01/2019
					5/19/2020
2020					5/26/2020
	5/19/2020	5/19/2020	5/19/2020	5/19/2020	5/28/2020
2021	4/27/2021	4/27/2021	4/27/2021	4/27/2021	4/27/2021

					5/4/2021
					5/6/2021
					4/11/2022
2022					5/10/2022
	4/11/2022	4/11/2022	4/11/2022	4/11/2022	5/13/2022
					4/10/2023
2023					5/5/2023
	4/10/2023	4/10/2023	4/10/2023	4/10/2023	5/8/2023

^{*} sampling has not occurred for 2024 and is not yet required.

Sampling	YES		NO	\boxtimes
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Records Review

The following records were reviewed as part of the on-site inspection and are considered complete:

- Copy of Individual Permit
- Copy of Permit Application
- Discharge Monitoring Reports and Surface Water Monitoring
 - o 2019 Submitted June 29, 2019
 - o 2020 Submitted July 20, 2020
 - o 2021 Submitted July 21, 2021
 - o 2022 Submitted June 30, 2022
 - o 2023 Submitted June 30, 2022
- Quality Assurance Project Plan
 - o Chain of Custody
 - o Training (Admiralty does the training)
 - o Calibration records from monitoring equipment
- Best Management Practices Plan
 - Inspections
 - o Training
- Field monitoring
- Noncompliance notifications (none during the review period)

Closing Conference

The following participants were present during the closing conference:

- Kenneth O'Brien DEC
- Dan Bleidorn CBJ

Upon completion of inspection, a closing conference was held. The DEC inspector provided the facility with preliminary inspection findings and discussed follow-up procedures.

Section 4: Compliance

Violations

No violations were identified during this inspection.

Areas of Concern

The language of the permit is not specific regarding DMR submittal, and outside of the Schedule of Submission, which conflicts with Permit Part III.B, simply states that DMRs are due 'annually and must be postmarked on or before June 30'. Furthermore, section II.B.3 states that the DMR 'must be submitted to EPA and ADEC with the annual DMR." Upon investigation within NetDMR and the Integrated Compliance Monitoring Strategy (ICIS) it appears that the DMR 'due date' is the following year by June 30th – meaning the 2023 monitoring, that was conducted between January 1, 2023 and May 31, 2023 (specifically sampled on April 10, 2023) is not due until June 30, 2024. DEC will defer to the EPA, but this extended due date of over a year is atypical within the APDES/NPDES permit universe. The Permit does not contain specific enough information to determine if the 2020 and 2021 DMR submittal was late, as they were both submitted in July of there respective year, however, the extended due date in ICIS and NetDMR makes them compliant.

Section 5: Appendixes

- 1. Photo Addendum
- 2. DMR Summary

Signature

Inspector – Jon Wendel Credential Number: R-0317 Phone: (907) 465-5364

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Reviewed By – Jake Ross Credential Number:R-0519 Phone: (907) 465-5308

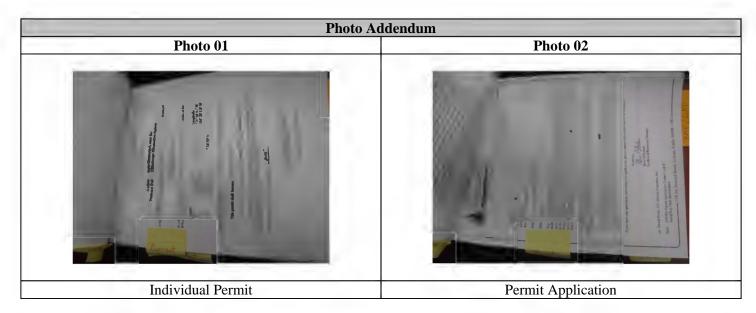
E-mail: jake.ross@alaska.gov

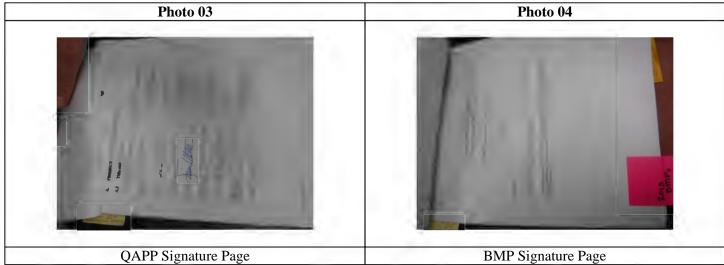
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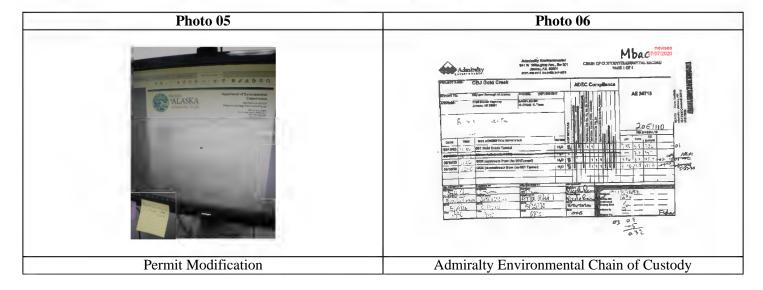
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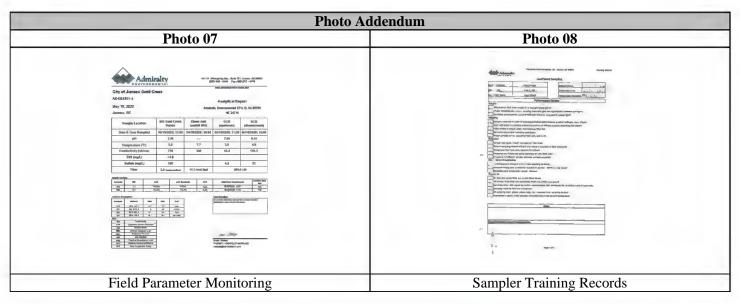
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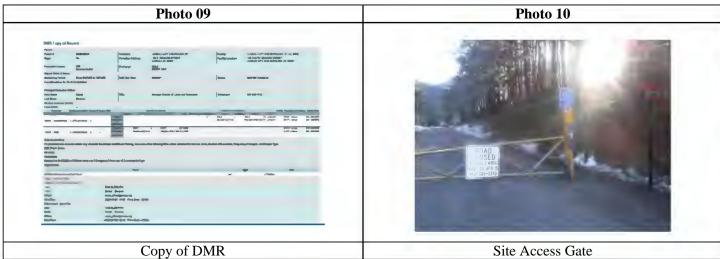
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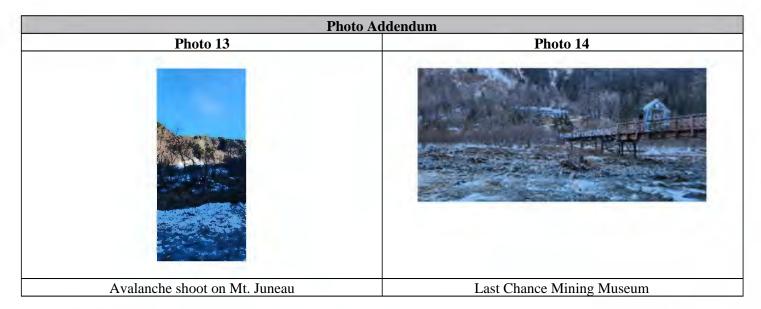




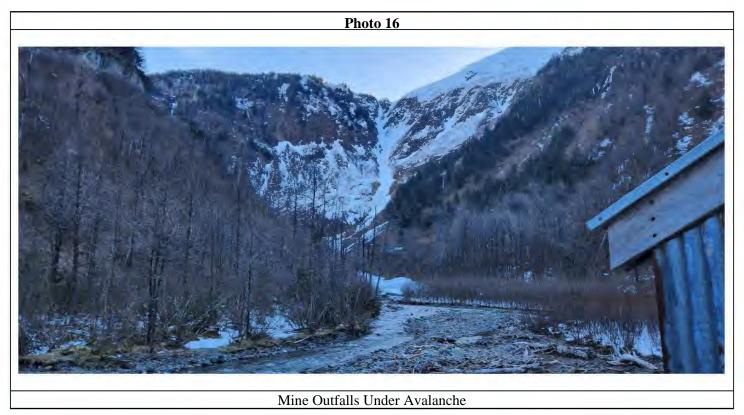


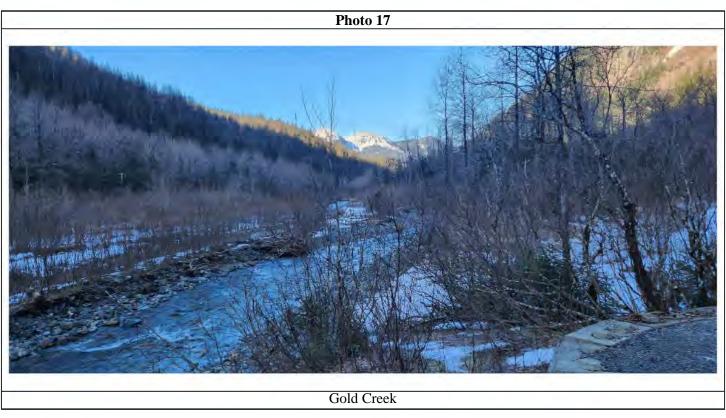


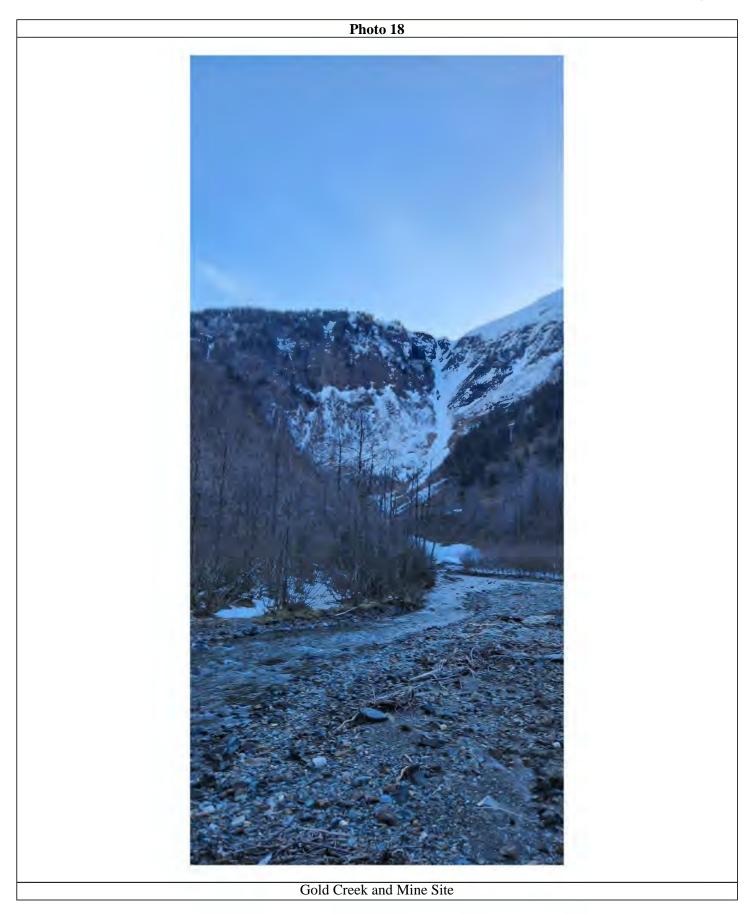












Permit Numb	e Parameter	DMR Value	Units
AK0049514	pH	8.09	
AK0049514 AK0049514	рН	8.09	
AK0049514 AK0049514	•		mg/L
	Alkalinity, total [as CaCO3]		-
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Cadmium, total recoverable		ug/L
AK0049514	Cadmium, total recoverable		ug/L
AK0049514	Lead, total recoverable		ug/L
AK0049514	Lead, total recoverable		ug/L
AK0049514	Copper, total recoverable		ug/L
AK0049514	Copper, total recoverable		ug/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Mercury, total recoverable	0.00234	O .
AK0049514	Mercury, total recoverable	0.00234	•
AK0049514	Flow		MGD
AK0049514	Flow	4.13	MGD
AK0049514	Conductivity		umho/cm
AK0049514	Conductivity	344	umho/cm
AK0049514	Flow	0.0083	MGD
AK0049514	Flow	0.0083	MGD
AK0049514	рН	7.95	
AK0049514	рН	7.95	SU
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Solids, total suspended	4	mg/L
AK0049514	Solids, total suspended	4	mg/L
AK0049514	Hardness, total [as CaCO3]	410	mg/L
AK0049514	Hardness, total [as CaCO3]	410	mg/L
AK0049514	Selenium, total recoverable	4.6	ug/L
AK0049514	Selenium, total recoverable	4.6	ug/L
AK0049514	Zinc, total recoverable	38	ug/L
AK0049514	Zinc, total recoverable	38	ug/L
AK0049514	Cadmium, total recoverable	0.1	ug/L
AK0049514	Cadmium, total recoverable	0.1	ug/L
AK0049514	Lead, total recoverable		ug/L
AK0049514	Lead, total recoverable		ug/L
AK0049514	Copper, total recoverable		ug/L
AK0049514	Copper, total recoverable		ug/L
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AK0049514	Solids, total dissolved	480	mg/L
AK0049514	Solids, total dissolved	480	mg/L
AK0049514	Mercury, total recoverable	0.0026	ug/L
AK0049514	Mercury, total recoverable	0.0033	ug/L
AK0049514	Flow	0.743	MGD
AK0049514	Flow	0.743	MGD
AK0049514	Conductivity	349	umho/cm
AK0049514	Conductivity	349	umho/cm
AK0049514	Flow	0.017	MGD
AK0049514	Flow	0.017	MGD
AK0049514	рН	7.94	SU
AK0049514	pH	7.94	SU
AK0049514	Alkalinity, total [as CaCO3]	100	mg/L
AK0049514	Alkalinity, total [as CaCO3]	100	mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Cadmium, total recoverable		ug/L
AK0049514	Cadmium, total recoverable		ug/L
AK0049514	Lead, total recoverable	0.26	_
AK0049514	Lead, total recoverable	0.26	_
AK0049514	Copper, total recoverable	0.24	
AK0049514	Copper, total recoverable	0.24	-
AK0049514	Solids, total dissolved		mg/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Mercury, total recoverable	0.00365	•
AK0049514	Mercury, total recoverable	0.006	-
AK0049514	Flow		MGD
AK0049514	Flow		MGD
AK0049514	Conductivity		umho/cm
AK0049514	Conductivity		umho/cm
AK0049514	Flow	0.023	
AK0049514	Flow	0.023	
AK0049514	pH	8.02	
AK0049514	pH	8.02	
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Solids, total suspended		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Hardness, total [as CaCO3]		mg/L
AK0049514	Selenium, total recoverable		ug/L
, 110043314	Jeremani, total recoverable	7.7	~6/ ∟

AK0049514	Selenium, total recoverable	4.7	ug/L
AK0049514	Zinc, total recoverable	22	ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Cadmium, total recoverable	0.001	_
	·		-
AK0049514	Cadmium, total recoverable	0.001	O .
AK0049514	Lead, total recoverable	0.001	ug/L
AK0049514	Lead, total recoverable	0.001	ug/L
AK0049514	Copper, total recoverable	0.001	ug/L
AK0049514	Copper, total recoverable	0.001	ug/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Solids, total dissolved		mg/L
AK0049514			-
	Mercury, total recoverable	0.00475	-
AK0049514	Mercury, total recoverable	0.005	_
AK0049514	Flow	1.26	MGD
AK0049514	Flow	1.26	MGD
AK0049514	Conductivity	364	umho/cm
AK0049514	Conductivity	364	umho/cm
AK0049514	Flow	0.0126	MGD
AK0049514	Flow	0.0126	
AK0049514	pH	8.01	
	·		
AK0049514	pH	8.01	
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Alkalinity, total [as CaCO3]		mg/L
AK0049514	Solids, total suspended	4	mg/L
AK0049514	Solids, total suspended	4	mg/L
AK0049514	Hardness, total [as CaCO3]	380	mg/L
AK0049514	Hardness, total [as CaCO3]	380	mg/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Selenium, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Zinc, total recoverable		ug/L
AK0049514	Cadmium, total recoverable		ug/L
AK0049514	Cadmium, total recoverable	0.1	ug/L
AK0049514	Lead, total recoverable	0.26	ug/L
AK0049514	Lead, total recoverable	0.26	ug/L
AK0049514	Copper, total recoverable	0.45	ug/L
AK0049514	Copper, total recoverable		ug/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Solids, total dissolved		mg/L
AK0049514	Mercury, total recoverable	0.0033	
AK0049514	Mercury, total recoverable	0.0021	
AK0049514	Flow		MGD
AK0049514	Flow	1.862	MGD
AK0049514	Conductivity	356	umho/cm
AK0049514	Conductivity	356	umho/cm
AK0049514	Flow	0.0136	MGD
AK0049514	Flow	0.0136	
	-	5.5230	