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FILED in the TRIAL COURTS
State of Alaska Third District

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**IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
THIRD JUDICIAL DISTRICT AT ANCHORAGE**

ORUTSARARMIUT NATIVE COUNCIL,)
)
Appellant,)
v.)
ALASKA DEPARTMENT OF)
ENVIRONMENTAL CONSERVATION and)
DONLIN GOLD LLC,)
Appellees.)
)

06502
Appeal Case No. 3AN-21-**** CI

**NOTICE OF APPEAL
(FROM ADMINISTRATIVE AGENCY TO SUPERIOR COURT)**

Notice is hereby given that Orutsararmiut Native Council appeals to the Superior Court from the following decisions: the May 27, 2021 decision of Jason Brune, Commissioner of the Alaska Department of Environmental Conservation (Department), upholding the Division of Water's Clean Water Act Section 401 Certificate of Reasonable Assurance for Donlin Gold, LLC's Donlin Gold Project; and the corresponding Certificate of Reasonable Assurance, dated April 5, 2019. Copies of the agency decisions are attached as Exhibits 1 and 2, respectively.

STATEMENT OF POINTS

The reasons for this appeal are:

1. The Department's finding that there is reasonable assurance of compliance with regulations requiring full protection of existing uses of the water, 18 AAC 70.015(a)(2)(C), is contrary to law, arbitrary, an abuse of discretion, lacking a reasonable basis, and not supported by substantial evidence.
2. The Department's finding that there is reasonable assurance of compliance with the water quality standard for chronic exposure to mercury, 40 C.F.R. § 131.36(b)(1) (row "8 Mercury," column B2), is contrary to law, arbitrary, an abuse of discretion, lacking a reasonable basis, and not supported by substantial evidence.
3. The Department's finding that there is reasonable assurance of compliance with the temperature standards for fish egg and fry incubation, spawning, migration, and rearing, 18 AAC 70.020(b), Tbl. at (10)(A)(iii), (10)(C), is contrary to law, arbitrary, an abuse of discretion, lacking a reasonable basis, and not supported by substantial evidence.

NOTICE OF APPEAL

Orutsararmiut Native Council v. ADEC,
Appeal Case No. 3AN-21-**** CI

INFORMATION PURSUANT TO APPELLATE RULE 602(c)(1)

Appellant's name and current address:

ORUTSARARMIUT NATIVE COUNCIL
P.O. Box 927
Bethel, AK 99559

Respectfully submitted this 28th day of June, 2021.

s/ Thomas Waldo

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CERTIFICATE OF SERVICE AND TYPEFACE

I certify that on June 28, 2021, a copy of the foregoing NOTICE OF APPEAL, with the accompanying documents, was served by first class U.S. mail and email on the following:

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In addition, courtesy copies were sent via email to the following: Jennifer Currie, Attorney, Department of Law, jennifer.currie@alaska.gov; and Z. Kent Sullivan, Administrative Law Judge, kent.sullivan@alaska.gov.

In accordance with Appellate Rule 513.5(c), I also certify that the typeface used in the foregoing document is 13-point Times New Roman.

s/ Iris Korhonen-Penn
Iris Korhonen-Penn
EARTHJUSTICE

BEFORE THE ALASKA OFFICE OF ADMINISTRATIVE
HEARINGS ON REFERRAL FROM THE COMMISSIONER OF
ENVIRONMENTAL CONSERVATION

ORUTSARARMIUT NATIVE COUNCIL, et al.

Requestors,

v.

ALASKA DEPARTMENT OF
ENVIRONMENTAL CONSERVATION,
DIVISION OF WATER, and DONLIN GOLD
LLC,

Respondents.

OAH No. 20-0536-DEC

COMMISSIONER'S DECISION

The request by Orutsararmiut Native Council (ONC) to rescind the Section 401 Certificate of Reasonable Assurance is denied. Because the decision of the Alaska Department of Environmental Conservation's Division of Water (the Division) under the Clean Water Act to issue the Certificate is supported by a reasonable basis in law and substantial evidence in the record, it is therefore upheld. This decision constitutes the final agency decision in this matter under AS 44.64.060(e)(3)-(5).

FINDINGS OF FACT

The Department accepts the Division's findings of fact. Relevant facts are repeated below, supplemented by the Department.

I. Findings of fact related to all claims.

- A. Donlin Gold LLC proposes to develop an open-pit, hard-rock gold mine in Southwest Alaska on land owned by two Alaska Native Corporations,

Calista Corporation and The Kuskokwim Corporation.

- B. The proposed mine site is located entirely within the Crooked Creek watershed. Crooked Creek begins at the confluence of Donlin Creek and Flat Creek and terminates at Crooked Creek’s confluence with the Kuskokwim River. The straight-line distance between the start of Crooked Creek and its termination at the Kuskokwim River is 15 miles, or approximately 33 “stream miles.”
- C. Important components of the Project include the mine site near Crooked Creek, transportation facilities (a port, roads, and an airstrip) and a natural gas pipeline from Cook Inlet to the mine site.
- D. The proposed mine site includes the Project’s open pit and several other major facilities, including the waste rock facility, the tailings storage facility, and the plant site. The mine site location is immediately east of Crooked Creek and immediately north of Crevice Creek.
- E. In July 2012, Donlin applied to the U.S. Army Corps Engineers (Corps) for a permit under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act.¹ The Corps determined that preparation of an Environmental Impact Statement (EIS) was necessary to inform the permit decision. The Corps led the preparation of the EIS.² Four federal agencies, the State of Alaska, and six Alaska Native tribal councils participated as cooperating agencies during the Corps’ development of the EIS.³
- F. The Corps issued a Draft EIS on November 25, 2015 for public notice and comment. The Corps issued the Final EIS (FEIS) on April 27, 2018.⁴
- G. On June 5, 2018, Donlin requested that the Alaska Department of Environmental Conservation (Department) Division of Water begin its process to consider issuing a Certificate of Reasonable Assurance

¹ U.S. Army Corps of Engineers & U.S. Bureau of Land Management, Donlin Gold Project Joint Record of Decision and Permit Evaluation (ROD), DEC 002671.

² ROD, DEC 002672.

³ ROD, DEC 002672.

⁴ ROD, DEC 002672.

(Certificate) required for the proposed 404 permit under Clean Water Act section 401.⁵

- H. The Division issued notice of Donlin’s certification materials on June 13, 2018, establishing a public comment period from that date through July 13, 2018.⁶ Following public comments and Donlin’s response to public comments,⁷ the Division issued a Certificate, Antidegradation Analysis, and a Response to Comments on August 10, 2018.⁸ The Certificate included eleven conditions.
- I. On August 13, 2018, the Corps and the Bureau of Land Management (BLM) issued a joint Record of Decision and Permit Evaluation (ROD),⁹ along with a combined Clean Water Act section 404 and Rivers and Harbors Act section 10 permit.¹⁰ The ROD outlines the decision to select Alternative Two as identified in the EIS, subject to special conditions and specific mitigation. The ROD includes the Corps’ determinations that impacts to water quality and chemistry are not expected to exceed regulatory limits, that the proposed Project would have minor adverse effects on water quality, and that the Project is not contrary to the public interest.¹¹
- J. On August 30, 2018, ONC submitted a request for informal review of the Certificate on behalf of six Alaska Native tribes and organizations.¹² ONC amended this request on September 28, 2018.¹³ The Division’s Director issued a decision on the amended request on October 19, 2018, remanding the Certificate to the Division for further review based on the issues

⁵ Email from Donlin to Department of Environmental Conservation (DEC), DEC 000078.

⁶ Notice of Application for State Water Quality Certification, DEC 002008–09.

⁷ Letter from Donlin to DEC, DEC 002605–19.

⁸ DEC Certificate of Reasonable Assurance, DEC 003706–10; DEC Response to Comments, DEC 003719–31.

⁹ ROD, DEC 002659–3053.

¹⁰ Department of the Army Permit POA-1995-120, DEC 003691–97.

¹¹ ROD, DEC 008343.

¹² Letter from Earthjustice to DEC, DEC 003101–19.

¹³ Letter from Earthjustice to DEC, DEC 002639–58.

identified by ONC.¹⁴

- K. The Division revised its Response to Comments and reissued the Certificate on April 5, 2019,¹⁵ concluding that “there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with the applicable provisions of Section 401 of the Clean Water Act (CWA) and the Alaska Water Quality Standards.”
- L. On April 24, 2019, ONC submitted a second request for informal review on behalf of eleven Alaska Native tribes and organizations, raising issues substantially like those identified in its first request.¹⁶ The Division’s Director issued a decision on the second request on May 8, 2019, once more remanding the Certificate to the Division in order to address the identified issues.¹⁷ The Division addressed the issues raised by ONC in revised Responses to Comments and affirmed the previously issued Certificate on May 7, 2020.¹⁸ The Certificate did not change as a result of the remand.
- M. On June 5, 2020, ONC submitted a request for an adjudicatory hearing on behalf of several Alaska Native tribes and other organizations.¹⁹ The Department’s Commissioner referred the adjudicatory hearing request to the Office of Administrative Hearings. On July 31, 2020, ALJ Sullivan recommended that the Commissioner grant an adjudicatory hearing on three issues: mercury, water temperature, and existing uses.²⁰
- N. On September 3, 2020 Administrative Law Judge (ALJ) Kent Sullivan met with Commissioner Brune to discuss the administrative hearing. Based on this discussion, a decision was made determining that only ONC had satisfied the requirements of 18 AAC 15.200(a), entitling it to a hearings on the briefs of the existing record. It was further determined that the

¹⁴ Letter from DEC to Earthjustice, DEC 003099–100.

¹⁵ DEC Certificate of Reasonable Assurance, DEC 000016–23.

¹⁶ Letter from Earthjustice to DEC, DEC 003312–28.

¹⁷ Letter from DEC to Earthjustice, DEC 003585–86.

¹⁸ Letter from DEC to Earthjustice, DEC 003590–91.

¹⁹ DEC 000062–77.

²⁰ Decision on Recommended Ruling on Request for Adjudicatory Hearing (July 31, 2020).

remaining requesters specifically failed to meet requirements of 18 AAC 15.200(a) and therefore, were not entitled to an administrative hearing.

- O. The September 3, 2020 meeting between ALJ Sullivan and Commissioner Brune was the sole consultation during this entire administrative process.
- P. Parties fully briefed the issues and submitted proposed findings of fact and conclusions of law.
- Q. On April 23, 2021, the ALJ issued a notice of his recommended decision, without consulting with Commissioner Brune, giving parties until May 5, 2021, to submit proposals for action.
- R. In addition to the Corps and the Division, numerous government agencies, both state and federal, have conducted substantial technical analyses, issued permits, and granted approvals for aspects of the Project. These permits are legal documents with which the source must comply. These include:
 - 1. A Waste Management Permit (WMP) issued by the Division on January 18, 2019 and revised on June 25, 2019.²¹ The WMP requires Donlin “to control and treat onsite surface water, groundwater and seepage as necessary to prevent offsite water quality exceedances.”²² Further, the WMP includes conditions that require a detailed monitoring plan, surface and groundwater monitoring near the site to ensure water quality standards or natural conditions are protected, notification to the Department if statistically significant increases in concentrations of constituents above water quality standards are detected by surface water or groundwater monitoring, and corrective action if violations of water quality standards are identified.²³ Donlin is required to comply with all permit conditions and plans adopted by reference.²⁴

²¹ DEC Waste Management Permit 2017DB0001 (WMP), DEC 006923–50.

²² WMP, DEC 006929.

²³ WMP, DEC 006936–40.

²⁴ WMP, DEC 006928. *See* AS 46.03.120 (establishing DEC authority to terminate or modify waste permits for failure to comply with permit conditions); AS 46.03.760 (establishing civil liability and penalties for noncompliance with terms or conditions of DEC permits).

2. An Air Quality Control Construction Permit, issued by the Department's Division of Air Quality on June 30, 2017.²⁵ Construction permits specify what construction is allowed, what emission limits must be met, and often how the source can be operated. Further, specifications contain conditions to ensure the source is built to match parameters in the application that the permit agency relied on in their analysis. To ensure that sources follow the permit requirements, permits also contain monitoring, record keeping, and reporting requirements. Noncompliance with each permit and condition is a violation of AS 46.14, 18 AAC 50, and the federal Clean Air Act. Violations are grounds for enforcement actions, permit termination or revocation, or denial of permit renewal application.

3. Two Alaska Pollutant Discharge Elimination System (APDES) permits: a Multi-sector General Permit (MSGP) addressing storm water runoff, and a Wastewater Treatment Permit (WWTP).²⁶ Prior to issuing these APDES permits, the Department was required to conduct the same antidegradation analysis for discharges that is required for CWA water quality certifications.²⁷ These permits mandate that all water discharges from the Project must comply with Alaska water quality standards.²⁸ Contact water and storm water cannot be discharged to Crooked Creek until it is treated or otherwise controlled to meet water quality standards, and discharges from the mine's wastewater treatment plant must comply with applicable water quality standards. Both permits require extensive monitoring of discharges, and the WWTP also requires monitoring of the receiving water and reporting to the Department.²⁹ Noncompliance with these permits amount to water quality violations, which are subject to state enforcement.

²⁵ DEC Air Quality Control Construction Permit AQ0934CPT01 (AQCC Permit), DEC 007823–921.

²⁶ APDES Permit AKRO6AA92 (MGSP), DEC 007538–815, and APDES Permit AK0055867 (WWTP), DEC 007202–241.

²⁷ See 18 AAC 70.015, 18 AAC 70.016(a)(1)(A).

²⁸ See FEIS at 3.7-167, DEC 016385 (“effects from all project-related discharges to Crooked Creek would be treated to meet the most stringent AWQC prior to discharge”); DEC Response to Comments, DEC 000050–51.

²⁹ MGSP, DEC 007588; WWTP, DEC 007205, 007210–12.

4. An antidegradation analysis required by the state’s antidegradation policy and implementation methods was conducted prior to the issuance of the Certificate.³⁰ The analysis determined, among other things, that existing use protections under 18 AAC 70.016(b)(5) were met and provided a finding that the 401 Certificate would be adequate to fully protect and maintain the existing uses of the water.³¹
5. An Aquatic Resources Monitoring Plan (ARMP).³² Monitoring under the ARMP is incorporated as a condition in Donlin’s fish habitat permits.³³ The objectives of the ARMP are to:
 - a. Monitor for major changes to aquatic communities;
 - b. Monitor for smaller-scale and incremental changes to aquatic communities; and
 - c. Guide results-based refinement to the monitoring program.

Donlin must comply with its obligations under the ARMP and violations or noncompliance is subject to permit termination, revocation, or penalties.³⁴

6. The ARMP requires Donlin “to collect information throughout the Project life cycle to assess aquatic life and hydrologic conditions in the Crooked Creek watershed that have the potential to be affected by the project.”³⁵
7. The ARMP requires Donlin to conduct chemical, biological, and physical monitoring at thirteen sites. Physical monitoring includes

³⁰ The EPA approved the state’s antidegradation policy and implementation methods on July 26, 2018, as consistent with the Clean Water Act and applicable Code of Federal Regulations in 40 CFR 131.

³¹ See Memorandum, Antidegradation Analysis – Donlin Project, POA-1995-120 (updated), DEC 000001-14.

³² Aquatic Resources Monitoring Plan, Plan of Operations - Volume VII C, Donlin Gold Project (ARMP), DEC 006612–865.

³³ ADF&G Fish Habitat Permits, DEC 006896, 006904, 006910, 006915–16,006921.

³⁴ ADF&G Fish Habitat Permits, DEC 006896, 006905, 006911, 0069116, 006921.

³⁵ ARMP, DEC 006617.

Crooked Creek streamflow monitoring and substrate freeze-down surveys. Aquatic, biological, and flow component monitoring includes:

- a. Fish presence/abundance, invertebrate and periphyton sampling, and fish metals analysis for specific elements, *including mercury/methyl mercury*;³⁶
 - b. Flow monitoring and winter surface water sampling to characterize fish habitat and passage and freeze-down patterns, *including temperature measurement and evaluation of the viability of fish spawning sites*;³⁷
 - c. Sediment sampling;
 - d. Collection of additional geology and hydrology data to refine understanding of dewatering and surface flow dynamics; and
 - e. During construction, operations, and through the first 5 years post-closure, aerial surveys for salmon and redds with timing to coincide with the end of the migration peak to count the maximum number of adult salmon in the system and to determine how far upstream into the drainages each species migrates.³⁸
8. Donlin will analyze all information and data collected under the ARMP against baseline data and report annually to the Alaska Department of Fish and Game (ADF&G). Donlin and ADF&G will evaluate all sites and components of the ARMP annually to determine whether modifications to the plan or Project activities are necessary.³⁹
9. ADF&G Fish Habitat Permits have been issued for the Project including:
- a. Fish Habitat Permit FH18-III-0191, which includes provisions for the development of the ARMP; and
 - b. Fish Habitat Permits FH18-III-0192 and FH18-III-0193, which have been issued for restoration of aquatic habitats in Ruby, Queen, and Snow Gulches.

³⁶ Emphasis added.

³⁷ Emphasis added.

³⁸ ARMP, DEC 006621.

³⁹ ARMP, DEC 006646–48.

Restoration of these habitats is intended to offset potential habitat losses.

10. Donlin is required to engage in adaptive management under the ARMP. Adaptive management is a four-step iterative process that analyzes monitoring data to modify planned actions in response to observed changes from baseline conditions. The process includes:
 - a. Biomonitoring of aquatic resources to establish baseline conditions during construction, operations, closure, and post-closure to evaluate whether Project activities have caused changes in the aquatic ecosystem relative to the baseline conditions.
 - b. Analyzing monitoring results for changes in the aquatic ecosystem to assess whether they are being affected by Project activities and whether mitigation measures are successful and documenting the analysis in annual reports.
 - c. Using site aquatic biomonitoring analyses to modify or plan future monitoring or Project actions.
 - d. Taking appropriate action based on the results of steps one through three and making appropriate modifications to, or implementing Project activities, mitigation measures, and/or monitoring as necessary, by:
 - i. Implementing measures prior to Project development to offset predicted future impacts, or in response to measured impacts;
 - ii. Quantifying predicted impacts and predicted changes, and understanding fully their causes to generate designs to minimize or mitigating impacts; and
 - iii. Making changes even before Project development to offset predicted future impacts.⁴⁰

II. Findings of fact related to reasonable assurance of compliance with water quality standards for stream temperatures in Crooked Creek.

ONC claims that the Project will not comply with Alaska water quality standards

⁴⁰ ARMP, DEC 006648–49.

for stream temperatures, based on the following statement in the FEIS:

Maximum recorded stream temperatures for Crooked Creek at Crevice Creek in June, July, and August are 45.8°F, 51.6°F, and 50.1°F, respectively. Under summer low flow conditions during mining operations, reductions in groundwater inputs to Crooked Creek could cause stream temperatures in reaches near the mine to be close to or above the State of Alaska’s water quality temperature standard of 55.4°F for egg/fry incubation and spawning and 59.0°F for migration and rearing.⁴¹

- A. The EIS’s reference to “reductions in groundwater inputs to Crooked Creek” refers to modeled reductions in groundwater flow into Crooked Creek caused by dewatering wells that are located in and around the Project open pit.⁴² These dewatering wells draw groundwater toward the Project open pit and away from Crooked Creek, thereby creating a groundwater “cone of depression” around the Project open pit.⁴³ Groundwater modeling indicates that as a result, groundwater will no longer rise up (upwell) and discharge to Crooked Creek in the vicinity of the Project open pit.⁴⁴ If so, this will reduce the discharge of colder groundwater to Crooked Creek in this specific area.⁴⁵
- B. The baseline temperatures identified in the FEIS statement quoted above are from a single location: the Crooked Creek/Crevice Creek gauging station (CCAC).⁴⁶ This gauging station is located in Crooked Creek,

⁴¹ FEIS at 3.13-101, DEC 017029 (internal citation removed).

⁴² FEIS at 3.6-2, DEC 016153; FEIS at 3.6-30, DEC 016181–82; FEIS at 3.13-101, DEC 017029.

⁴³ FEIS at 3.6-30–31, DEC 016181–82; FEIS at 3.13-78, DEC 017006; FEIS at 3.13-101, DEC 017029.

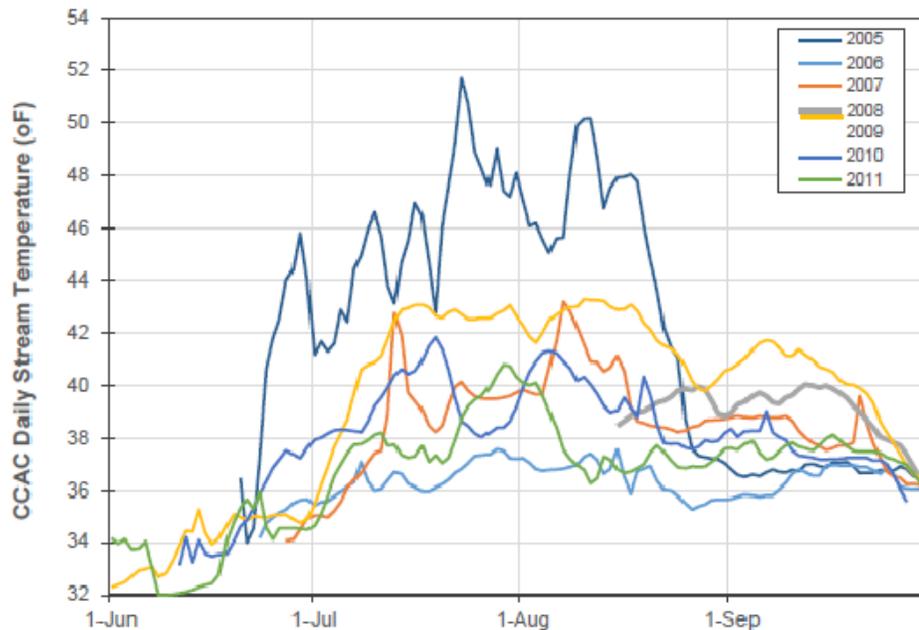
⁴⁴ FEIS at 3.6-27, DEC 016178; FEIS at 3.6-30–31, DEC 016181–82.

⁴⁵ FEIS at 3.13-101, DEC 017029.

⁴⁶ See BGC Engineering, Inc., Donlin Gold, Donlin Creek Gold Project, Hydrometric Stations: Data and Installation Summary (June 14, 2012) (BGC 2012a), Appendix A, Memorandum from Peter S. McCreath, Clearwater Consultants Ltd., to Richard Ridley, Placer Dome Technical Services Ltd., “Donlin Creek Project Hydrology Investigation 2005, Installation of Streamflow Gauging Stations” (July 25, 2005), Appendix A, “Table A7 - Monthly Summary 2005 - Discharge & Water Temperature Data,” at 177 (describing highest recorded daily water temperatures (in Celsius) for the months of June, July, and August at CCAC monitoring location).

approximately 490 feet upstream from the confluence of Crevice Creek with Crooked Creek, immediately downstream from the southern end of Project development. At this location, Crooked Creek’s channel is approximately 49 feet wide.⁴⁷

- C. The temperatures identified in the FEIS statement quoted above are the highest water temperatures that were recorded at CCAC over a 6 year period (2005 and 2007 to 2011).⁴⁸ The data for all 6 years are depicted on the following chart. The spikes on the blue line for 2005 are the *highest recorded* temperatures, and form the basis for ONC’s argument.



- D. All of the highest recorded water temperature readings during the 6 year period occurred in a single year—2005.⁴⁹
- E. Each of the highest recorded temperature readings at CCAC in 2005 were higher than the readings in the other five observed years, and they are all higher than the average temperatures that were recorded at this site over 6 years of observation.

⁴⁷ FEIS at 3.5-20, DEC 015997.

⁴⁸ See BGC 2012a at Appendix F, “Water Levels and Temperature Summary Figures (2005-2011),” Figures F16, F18–F21, at 302, 304–07 (outlining summer water temperatures recorded at CCAC for 2005, and 2007 through 2011).

⁴⁹ See *supra* fn. 47.

- F. Each of these highest recorded monthly stream temperature readings from this single year (2005)—45.8°F, 51.6°F, and 50.1°F—were below the applicable Alaska water quality temperature standards of 55.4°F for egg/fry incubation and spawning and 59.0°F for migration and rearing.⁵⁰
- G. In order for an exceedance of water quality standards for water temperature to occur, Project operations would have to increase the highest stream temperature observed at CCAC in 2005 by more than 3.8°F (for the egg/fry incubation and spawning standard) and more than 7.4°F (for the migration and rearing standard). Neither ONC nor the FEIS refers to any data or analysis that supports the conclusion that Project operations in general, or reduced groundwater flow in particular, would produce increases in water temperature of this magnitude.
- H. The FEIS does not state that temperature exceedances are probable or likely—it states only that exceedances are *possible*.⁵¹ ONC has not identified any evidence establishing that any exceedance of temperature standards is either probable or likely.
- I. The effect on stream temperature from reduced groundwater flow into Crooked Creek may be calculated using existing data. This data shows that even in 2005, when water temperatures were particularly high, withdrawal of groundwater flows associated with open pit dewatering would not produce water temperatures in excess of the maximum levels set by Alaska’s water quality standards.
1. Calculation of the effect on water temperatures from reduced groundwater flow involves four variables established by data in the record: the water temperature of Crooked Creek; Crooked Creek’s streamflow; groundwater flow that upwells into Crooked Creek; and groundwater temperature.
 2. Water temperatures at CCAC are discussed in Findings B3 and B4 (above). This analysis uses the highest recorded (2005) temperatures observed at CCAC.
 3. To assess the claim that temperature exceedances may occur, it is appropriate to consider the water temperatures and streamflows in the

⁵⁰ 18 AAC 70.020(b), Tbl. at (10)(A)(iii), (10)(c).

⁵¹ Emphasis added.

months with the highest stream temperatures. In 2005, the highest stream temperatures were in July and August. During these two months, the streamflow at CCAC ranged between approximately 40 cubic feet per second (cfs) to a peak near 180 cfs.⁵²

4. The groundwater component of the streamflow during these months was determined using the extensive groundwater modelling that Donlin completed as part of its 404 permit application and the FEIS process.⁵³ This modelling estimates the amount of groundwater flow lost from Crooked Creek as a result of open pit dewatering during summer months of Project operations at 2.0 cfs.⁵⁴ This lost flow is a small portion of the total streamflow in Crooked Creek as measured in July and August 2005, a loss of between 1.1% to 5% of the total streamflow.⁵⁵
5. The final variable for this calculation is the temperature of the groundwater. This data is known from temperatures gathered from June 2007 to March 2014 by a network of forty sampling locations. The average groundwater temperature was 35.6°F.⁵⁶
6. This data yields a calculation of what the 2005 water temperatures would have been in Crooked Creek at the confluence with Crevice Creek with a reduction in groundwater flow by 2.01 cfs, as predicted by the groundwater modelling. Removing 2.01 cfs of groundwater from Crooked Creek would raise the 2005 highest

⁵² See BGC 2012a at Appendix E, “Daily Discharge Data Summary Tables (1996-2011),” Table E-4, “Crooked Creek below Crevice Creek (CCAC) daily discharges,” at 281 (setting out streamflow (cfs) for July and August 2005).

⁵³ See BGC Engineering Inc., *Donlin Gold Project, Numerical Hydrogeologic Model*, (July 18, 2014) (BGC 2014c).

⁵⁴ Memorandum from Owl Ridge Natural Resources Consultants, Inc., “Potential effects to fish habitat from modeled changes in alluvium inflow and outflow” (Feb. 3, 2017), at 1.

⁵⁵ 2.01 cfs as a percentage of the July/August 2005 streamflow range stated above (40 cfs to 180 cfs).

⁵⁶ This average was calculated using the available groundwater temperature data from BGC 2014c. See BGC 2014c at 15 (discussing how “available data show that groundwater temperature generally varies from 32 to 43°”); BGC 2014c at Drawings 15–18 (plotting observed groundwater temperature data).

daily temperature from 51.6°F to 52.3°F.⁵⁷

7. The highest projected stream temperature based on predicted reduced groundwater at this location—52.3°F—is below the temperature limits set by Alaska’s water quality standards for egg/fry incubation and spawning (55.4°F) and salmon migration and rearing (59°F).⁵⁸ The projected water temperatures after removal of the groundwater component would be even lower if this calculation used the *average* water temperature at CCAC, rather than the *highest recorded* water temperatures that were observed at CCAC site in the warmest year, 2005.

J. The FEIS concluded that in areas near the Project site, incidents of injury or mortality to fish eggs may be detectable, but populations would remain within normal variation.⁵⁹ The FEIS concluded that in Lower Crooked Creek, there would be “no noticeable incidents or mortality to individual fish or other aquatic biota” and “population level effects are not detectable.”⁶⁰

K. Donlin’s Integrated Waste Management Monitoring Plan, incorporated into Donlin’s WMP, requires Donlin to monitor surface water and groundwater near the Project site to assure compliance with water quality

⁵⁷ This temperature (52.3° F) is derived by using the following equation:

$$T3 = \frac{Q1 * T1 + Q2 * T2}{Q1 + Q2}$$

In this equation, Q1 is the measured streamflow at CCAC minus Q2 (2.01 cfs). Q2 is the baseline groundwater flow into the stream at CCAC (2.01 cfs). T2 is the groundwater temperature (35.6°F). T3 is the measured water temperature at CCAC. These values yield T1: the calculated maximum temperature at CCAC without the groundwater flow into the stream (52.3°F). The calculated temperature of the stream at CCAC without the groundwater flow — (52.3° F) — is a correction to the temperature that Donlin stated in its December 29, 2020 brief at pages 42-43 (54.5° F).

⁵⁸ 18 AAC 70.020(b), Tbl. at (10)(A)(iii), (10)(c).

⁵⁹ FEIS at 3.13-155, DEC 017083.

⁶⁰ FEIS at 3.13-155, DEC 017083.

standards.⁶¹ Water temperature is one of the measured parameters.⁶² Where there is an exceedance or noncompliance with a permit requirement, Donlin is required to report to the Department and implement corrective action under Department oversight.⁶³

- L. The ARMP requires Donlin to conduct physical stream and biological monitoring of Crooked Creek that includes monitoring of streamflow changes due to open pit dewatering; shallow groundwater monitoring (which includes an evaluation of the effects of pumping and open pit dewatering); winter habitat freeze-down monitoring, including temperature measurement and evaluation of the viability of fish spawning sites; and surface water quality monitoring, with temperature being one of the measured parameters.⁶⁴

III. Findings of fact related to reasonable assurance of compliance with anti-degradation requirements related to reduced streamflow in a portion of Crooked Creek.

ONC claims that the Project will not comply with the antidegradation requirements in 18 AAC 70.015, based upon the following statement in the EIS:

The evaluation of flow reduction on spawning habitat determined that 65 percent (11 of 17) of the redds in Crooked Creek between American Creek and Anaconda Creek and 78 percent (7 of 9) of redds between Anaconda Creek and Crevice Creek were located in gravels that would be outside the predicted wetted portions of the stream channel during winter low flow conditions during construction and operations.⁶⁵

- A. Salmon redds are depressions in a streambed created by salmon for deposit of eggs during spawning.

⁶¹ WMP, DEC 006936; Integrated Waste Management Monitoring Plan, DEC 006534.

⁶² Integrated Waste Management Monitoring Plan, DEC 006576.

⁶³ Integrated Waste Management Monitoring Plan, DEC 006541–42.

⁶⁴ ARMP, DEC 006637–43, DEC 006626–27.

⁶⁵ FEIS at 3.13-90, DEC 017018.

- B. The quoted statement from the FEIS identified the modeled loss of redds in two contiguous segments of Crooked Creek. These two stream segments are 1) the segment of Crooked Creek between American Creek and Anaconda Creek, and 2) the segment of Crooked Creek between Anaconda Creek and Crevice Creek. These two stream segments are directly west of the proposed open pit and related facilities.⁶⁶
- C. A high percentage of the salmon spawning activity in Crooked Creek occurs in the lower portions of Crooked Creek, downstream from Crooked Creek's confluence with Crevice Creek, and downstream from the two segments identified above.
1. A 2009 ground (instream) survey of salmon redds identified 532 salmon redds in Crooked Creek.⁶⁷ More than 94% of the redds observed in this survey were downstream from Crevice Creek. Over 88% of the redds observed in this survey were located in the segment of Crooked Creek between Getmuna Creek and the Kuskokwim River.⁶⁸
 2. Aerial surveys of salmon redds conducted every summer from 2009 through 2014 documented an annual average of 180 redds in the Crooked Creek watershed.⁶⁹ Ninety-eight of those redds were located in the mainstem of Crooked Creek below Crevice Creek, while an annual average of five redds were documented near the Project site. Average annual redd counts for Getmuna Creek and Bell Creek, including their tributaries, identified seventy-three and four redds, respectively.⁷⁰
 3. Aerial surveys of salmon redds conducted every fall from 2009 through 2014 documented a five-year average of approximately 257

⁶⁶ Donlin's Opposition to ONC's Appeal to the Commissioner at p. 12.

⁶⁷ FEIS at 3.13-89, DEC 017017.

⁶⁸ FEIS at 3.13-89, DEC 017017.

⁶⁹ See OtterTail Environmental, 2014 Aquatic Biomonitoring Report, Donlin Gold Project, 2004 through 2014 Data Compilation (OtterTail 2014c), Appendix F, "Crooked Creek Aerial Salmon Redd Counts (2009-2014)," at 161 (documenting summer totals); see also OtterTail 2014c at 103 (figure depicting reaches referenced in Appendix F).

⁷⁰ See OtterTail 2014c at 161 (setting out summer totals for reaches CR-R1 and CR-R2, CR-R3 and CR-R4, GM-R1 through GM-R5, and BL-R1 through BL-R3).

redds in the Crooked Creek watershed.⁷¹ On average, sixty-seven redds were counted on Crooked Creek below Crevice Creek, twenty-one redds near the Project site, and sixty-two upstream from the Project site. Average annual redd counts for Getmuna Creek and Bell Creek and their tributaries were sixty-three and forty-four, respectively.⁷²

- D. Surveys of adult salmon in area streams show that salmon are predominantly located in the stretches of Crooked Creek below Crevice Creek. Aerial surveys from 2004 to 2010 identified an annual average of 354 adult salmon in the main stem of Crooked Creek.⁷³ Of these 354 salmon, an average of 88% were in areas downstream from Crevice Creek.⁷⁴ 83% of the salmon in Crooked Creek were downstream of Getmuna Creek (i.e., they were located between the mouth of Getmuna Creek and Crooked Creek's confluence with the Kuskokwim River).⁷⁵ Only 12% of Crooked Creek salmon (an average of 40 out of 354 fish) were observed in the middle reach of Crooked Creek, upstream from Crevice Creek.⁷⁶ Even more salmon were observed in Crooked Creek tributaries far downstream from the area of Project activities. Average counts for Getmuna and Bell Creeks and their tributaries were 596 and 126 adult salmon, respectively.⁷⁷
- E. Projected winter low streamflow conditions in segments of Crooked Creek that are upstream from Crevice Creek near the Project site will not significantly affect the salmon spawning habitat in lower stretches of Crooked Creek, downstream from Crevice Creek.⁷⁸ This is because of the large proportion of the streamflow in lower Crooked Creek that is derived

⁷¹ See OtterTail 2014c at 161 (summarizing fall totals).

⁷² See OtterTail 2014c at 161 (setting out fall totals for reaches CR-R1 and CR-R2, CR-R3 and CR-R4, DO-R1 through DO-R3, DM-R1, and CR-R5, GM-R1 through GM-R5, and BL-R1 through BL-R3).

⁷³ FEIS at 3.13-89, DEC 017017.

⁷⁴ FEIS at 3.13-89, DEC 017017.

⁷⁵ FEIS at 3.13-89, DEC 017017.

⁷⁶ FEIS at 3.13-89, DEC 017017.

⁷⁷ FEIS at 3.13-22–23 and Table 3.13-6, DEC 016950–51 (setting out counts for reaches GM-R1 through GM-R5 and reaches BL-R1 through BL-R3).

⁷⁸ FEIS at 3.13-89, DEC 017017.

from the major tributaries, Bell Creek and Getmuna Creek, whose flow will not be affected by Project operations.⁷⁹

- F. In support of the conclusion that possible reduced winter flow will not significantly affect salmon spawning habitat in lower Crooked Creek, the FEIS referred to a 2012 study that compared potential flow reductions during Project operations, based on a flow reduction model, with the known locations and depths of the salmon redds observed in the 2009 study.⁸⁰ This analysis showed that in lower Crooked Creek (from Crevice Creek to Getmuna Creek), 3 out of 144 salmon redds observed in the 2009 survey would have been above the predicted winter low flow water line.⁸¹ None of the 348 salmon redds observed in Crooked Creek between Getmuna Creek and the Kuskokwim River would have been above the predicted winter low flow water line.
- G. The information presented in the FEIS supports the conclusion that a high percentage of Crooked Creek's salmon spawn in habitat areas that are located in the lower parts of the Crooked Creek watershed, and these habitat areas will not be significantly affected by potential low water conditions in the middle reach of Crooked Creek near the Project site. The FEIS concluded that "aquatic life in the lower parts of Crooked Creek would not be measurably impacted" by the project.⁸²
- H. The two segments of Crooked Creek identified by ONC are not significant in terms of salmon spawning habitat in Crooked Creek. The 2009 instream spawning survey identified a total of 532 salmon redds in the entire length of Crooked Creek.⁸³ This survey identified twenty-six redds in the two stream segments that form the basis for ONC's argument.⁸⁴ According to the flow depletion model, eighteen of these twenty-six redds would be above the winter low water level.⁸⁵ These 18 redds constitute 3.4% of the total salmon redds observed in Crooked Creek in the 2009 survey.

⁷⁹ FEIS at 3.13-89, DEC 017017.

⁸⁰ FEIS at 3.13-90, DEC 017018.

⁸¹ FEIS at 3.13-90, DEC 017018.

⁸² FEIS at 31, DEC 015306.

⁸³ FEIS at 3.13-89, DEC 017017.

⁸⁴ FEIS at 3.13-90, DEC 017018.

⁸⁵ FEIS at 3.13-90, DEC 017018.

- I. The modeled reduction in salmon redds in the entire main stem of Crooked Creek due to low winter streamflow is 21 redds out of 532 redds (18 redds in the American-Anaconda and Anaconda-Crevise segments identified by ONC, and 3 more redds in the Crevise-Getmuna segment). Thus, the modeled loss of salmon redds for the entire length of Crooked Creek is 3.9%.⁸⁶
- J. While the Crooked Creek reach near the proposed mine site does sustain spawning, the use by salmon for such purpose is marginal, indicating natural conditions suitable for spawning are poor. Salmon in Crooked Creek spawn mainly in the lower reaches of the creek, in areas where mine effects on spawning would be “unmeasurable.” Rather than result in “drying up” of redds, streamflow changes are likely to cause salmon to spawn in more suitable habitat in Crooked Creek.
- K. The ARMP requires Donlin to conduct year around physical streamflow monitoring to determine potential effects on Crooked Creek; to conduct shallow groundwater monitoring to quantify potential project-related changes in streamflow under both summer and winter flow conditions; to conduct winter habitat freeze-down monitoring to, in part, determine the viability of spawning sites within Crooked Creek; and to conduct watershed-level physical habitat mapping and surveys to track potential changes in aquatic habitat.⁸⁷ The ARMP also requires extensive salmon and salmon spawning and macroinvertebrate and periphyton surveys throughout the Crooked Creek watershed to allow assessment of how flow changes could be affecting salmon use at the watershed level.⁸⁸ Under the ARMP, adaptive management is required if changes from baseline conditions are observed.⁸⁹

IV. Findings of fact related to reasonable assurance of compliance with water quality standards for mercury in Crooked Creek.

ONC claims that the Project will not comply with the water quality standard for

⁸⁶ FEIS at 3.13-90, DEC 017018.

⁸⁷ ARMP, DEC 006637–45.

⁸⁸ ARMP, DEC 006625, DEC 006634.

⁸⁹ ARMP, DEC 006648–49.

chronic exposure to mercury, based upon a statement in the FEIS that mining operations “would likely cause an increase in exceedances of the 12 ng/L chronic criterion.”⁹⁰

A. Water sampling for mercury

1. As part of its water quality characterization program, in 2005-2015, Donlin conducted baseline water sampling. This sampling identified mercury concentrations in the waters closest to the Project (Crooked Creek and Donlin Creek).⁹¹
2. None of the 564 baseline samples exceeded the acute water quality standard for mercury (2400 ng/L).⁹²
3. “About 80” of the 564 baseline samples for mercury collected in 2005- 2015 exceeded 12 ng/L, the chronic standard for mercury.⁹³ The FEIS stated that mining operations “would likely cause an increase in exceedances of the 12 ng/l chronic criterion.”⁹⁴ The FEIS did not quantify the number of additional exceedances due to mining activities, or the frequency, magnitude, or duration of any increased exceedances. The FEIS also stated that atmospheric deposition of mercury during Project operations “could” result in increases in mercury concentrations that “may be” sufficient to exceed Alaska water quality criteria “at some locations.”⁹⁵ The FEIS did not quantify the likelihood of exceedances, or the number of locations.
4. This water sampling data is not sufficient to demonstrate noncompliance with the chronic water quality standard for mercury during mine operations.
 - a. Chronic standards are intended to identify the level of a pollutant that is protective against harm to aquatic organisms

⁹⁰ FEIS at 3.7-151, DEC 016369.

⁹¹ FEIS at 3.7-150, DEC 016368.

⁹² FEIS at 3.7-150, DEC 016368.

⁹³ FEIS at 3.7-151, DEC 016369.

⁹⁴ FEIS at 3.7-151, DEC 016369.

⁹⁵ FEIS at 3.7-152, DEC 016370.

that are exposed to the pollutant continuously for at least four days.⁹⁶

- b. None of the water sampling taken from 2005-2015 included samples taken on four or more consecutive days at any one location.⁹⁷ As a result, these samples alone do not indicate the existence of conditions that would expose aquatic organisms to mercury levels in excess of the chronic standard (12 ng/L) for four or more days.
- c. What the 2005-2015 sampling results do is identify a high degree of variability in mercury levels at the sampling locations. For example, sampling in CCAC shows highly variable mercury levels that are both above and below the 12 ng/L chronic standard. CCAC was sampled 39 times during 2005-2015 with results ranging from 1.5 ng/L to 67.4 ng/L. Seven of the 39 results exceeded the 12 ng/L chronic standard. None of the exceedances were observed in consecutive quarters of monitoring.⁹⁸
- d. The high degree of natural variability in mercury levels at the sampled locations may be explained by sporadic and localized events that increase mercury levels at particular locations for a finite period of time. These natural events could include high levels of snow melt or rainfall that wash mercury-laden soil into the stream, or high water events that disturb stream sediments containing mercury so that those sediments are suspended in the stream water for some period of time.
- e. This explanation is supported by information regarding baseline mercury in the area soil and streams. First, area soils contain high levels of mercury.⁹⁹ Second, water sampling results show a clear association between high mercury levels and high levels of other substances, such as total suspended

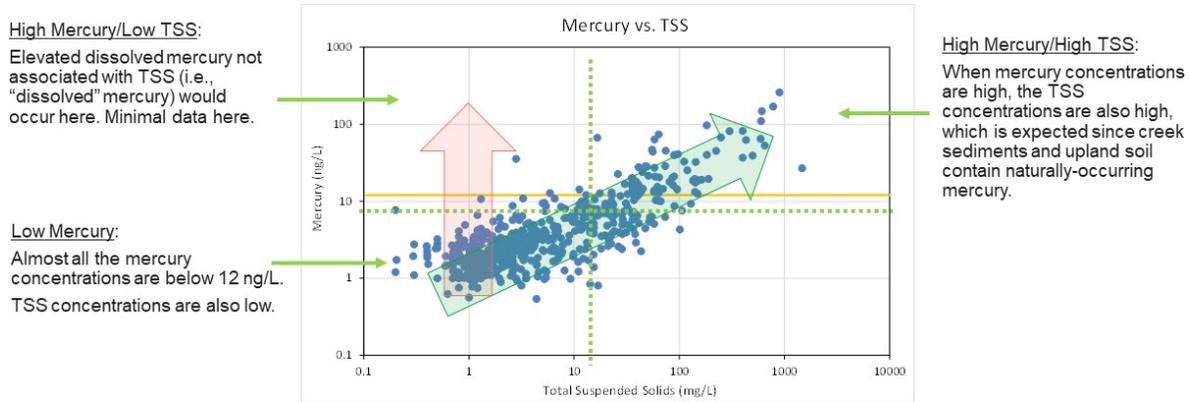
⁹⁶ 40 CFR § 131.36(b)(1), footnote d.

⁹⁷ The water sampling data for 2005-2015 is contained in Rieser 2017 (which is part of the EIS record), at SW Analytical Results for WRMP Appendix A - 23June2017.xlsx.

⁹⁸ See footnote 98.

⁹⁹ FEIS Table 3.2-1, DEC 015712.

solids (TSS), that are associated with events that produce erosion or heightened amounts of sediment in the water.¹⁰⁰ The following graph illustrates the point. The graph plots total mercury levels with concurrently-measured levels of TSS. The graph illustrates that elevated baseline mercury concentrations in surface water in Crooked Creek are well-correlated with the presence of TSS.



- f. For the foregoing reasons, the mercury sampling data is at best inconclusive about whether mercury levels in excess of 12 ng/L persist at any given location for periods long enough to produce chronic exposure for fish and other aquatic organisms.
- g. In addition, even if there are high mercury events at particular locations for finite periods, aquatic organisms are not necessarily present in these particular locations throughout such an event. Fish and other aquatic organisms move around. Thus, even if a high-mercury event occurs at a particular location for four days or more, any given fish or other aquatic organism may not be in that particular location for the entire period of the high-mercury event. If so, any mercury exposure for that particular aquatic organism may not be chronic exposure.

¹⁰⁰ Donlin’s baseline surface water monitoring data are summarized in FEIS table 3.7-2-4, DEC 016232–40, and are provided in the following documents cited in the FEIS references: Enos (2013b), Weglinski (2016), SRK (2017b), and Rieser (2017).

- h. Although there are periodic events when natural mercury levels within this watershed are elevated, the watershed sustains fish and other aquatic organisms. The continued productivity of the watershed suggests that high mercury events are sporadic and transient, and do not persist in a manner that implicates the chronic exposure standard.

B. Projected average mercury concentrations during operations

1. The FEIS evaluated potential increases in mercury concentrations from mine operations in waters within a 20-mile radius of the mine site, encompassing the Crooked Creek watershed. Within this area, mercury levels are projected to increase by about 0.2%, which the FEIS characterized as “negligible.”¹⁰¹ Mercury concentrations in this extended area are projected to average 7.8 ng/L, significantly below the chronic standard of 12 ng/L.¹⁰²
2. The FEIS also evaluated potential increases in mercury concentrations from mine operations in waters close to the mine site, specifically Donlin Creek and Crooked Creek.¹⁰³ The FEIS projected that during mine operations, average mercury concentrations in waters close to the mine site (Donlin Creek and Crooked Creek) would be 11 ng/L, which is below Alaska’s chronic standard for mercury, 12 ng/L.¹⁰⁴
3. The FEIS’s projection of average mercury levels in waters close to the mine site during mine operations is based on the following methodology:
 - a. Sampling data established an average baseline mercury concentration in waters close to the mine

¹⁰¹ FEIS at 3.7-160, DEC 016378.

¹⁰² FEIS at 3.7-159, DEC 016377.

¹⁰³ FEIS at 3.7-151–52, DEC 016369–70.

¹⁰⁴ Response to Comments at 26–27, 29, DEC 000049–50, 000052; FEIS at 3.7-151–52 and Table 3.7-42, DEC 016369–70.

site of 7.81 ng/L.¹⁰⁵

- b. The FEIS used a combination of monitoring and modeling to estimate the current (baseline) rate for atmospheric deposition of mercury. The baseline atmospheric annual deposition in the two closest watersheds to the Project, Crooked Creek and Donlin Creek, was estimated to range from 7.8 to 8.4 ug/m²/yr.¹⁰⁶
 - c. Based on modeling, the potential increase in atmospheric mercury deposition in the two watersheds closest to the Project due to mine operations was estimated to be 2.3 to 4.7 ug/m²/yr., with an average increase of about 3.5 ug/m²/yr. Thus, the projected average annual increase in atmospheric mercury deposition due to Project activities was estimated at approximately 40%.¹⁰⁷
 - d. Based on the projected 40% increase in atmospheric mercury deposition from mine operations, the FEIS projected a corresponding 40% increase in the mercury concentration in the waters close to the mine site. Applying this 40% increase to the average baseline mercury concentration of 7.81 ng/L (subparagraph a, above) yielded the predicted average mercury level in the affected streams of 11 ng/L.¹⁰⁸ This level is below the Alaska water quality standards' chronic level of 12 ng/L.
4. In determining projected average mercury concentrations during mine operations, the FEIS and the Department employed conservative assumptions, with the objective of establishing the upper limit of expected average mercury

¹⁰⁵ FEIS at 3.7-150, 3.7-152 and Table 3.7-42, DEC 016368, 016370.

¹⁰⁶ FEIS at 3.7-151, DEC 016369.

¹⁰⁷ FEIS at 3.7-151, DEC 016369.

¹⁰⁸ FEIS at 3.7-151–52 and Table 3.7-42, DEC 016369–70.

concentrations.¹⁰⁹ Conservative assumptions underlying the EIS's and the Department's projected average mercury concentrations during mine operations include the following:

- a. In evaluating the expected potential air emissions from project-related sources, the model used year twenty-six of the Project life. Year twenty-six is the year with the highest projected total mercury emissions. Mercury deposition levels are predicted to be lower in other years, especially early in the Project life.¹¹⁰
- b. The modeling considered two emission sources: (1) point-source (stack) emissions from Donlin's ore processing activities and (2) "fugitive" emissions of mercury, primarily from the Project tailings storage facility (TSF).¹¹¹ The TSF sources include fugitive emissions from the TSF beaches (dry areas) and the TSF surface (wet areas).¹¹² The assumed mercury concentration for the beaches was derived from characterization of solid tailings from pilot-scale processing tests, but the actual mercury concentrations in beach materials are expected to be lower.¹¹³ For the TSF pond surface, the mercury concentration in

¹⁰⁹ Response to Comments at 25, 27, 29, DEC 000048, 000050, 000052; FEIS at 3.7-150, 3.7-152, DEC 016368, 016370 (acknowledging that concentrations of mercury during Project operations were estimated in order to identify an "upper range" of potential changes).

¹¹⁰ Response to Comments at 26, DEC 000049. The Response to Comments indicates that this modelling was year 25 of mine operations, but the correct reference is year 26. *See also* ENVIRON International Corporation, Modeling of Local Impacts of Mercury Air Emissions from Stacks and Fugitive Sources, Advanced Water Treatment Scenario: Donlin Gold Mine, Alaska (Sept. 10, 2015) (Environ 2015), at 33, 34 (modelling relied on peak emissions predicted in year 26 of the mine life).

¹¹¹ *See* Environ 2015 at 19 (considering Project stack mercury emissions); Environ 2015 at 19–33 (considering Project fugitive mercury emissions).

¹¹² *See* Environ 2015 at 20 (discussing how mercury emissions at the TSF were estimated for the tailings beach and tailings pond).

¹¹³ *See* Environ 2015 at 23 ("We use the solids [mercury] concentration as a conservative estimate (i.e., over-estimate), of the beach [mercury] concentration; the latter will actually be lower than the solid tailings material [mercury] concentration.").

tailings slurry from pilot-scale tests was used. Actual mercury concentrations should be lower, because the solids portion of the slurry and associated mercury will settle below the pond surface and thus will be unavailable for air deposition.¹¹⁴

- c. Most of the atmospheric mercury potentially deposited into streams from Project activity will be particulate mercury. Due to the high density of these mercury particles, and the nature of the local streams, a substantial fraction of these mercury particles will sink to the bottom of the stream and be buried in sediment. These buried mercury particles will not increase the amount of mercury that is present in the stream water. The FEIS's estimate of average mercury concentrations ignored this factor and assumed that 100% of additional mercury deposited from atmospheric sources would become aqueous mercury.¹¹⁵

- d. Baseline mercury concentrations in the streams have two sources: atmospheric deposition (from sources such as forest fires and power plants in Asia) and non-atmospheric sources such as naturally-occurring mercury in soils and sediments.¹¹⁶ As discussed above there are clear indications that the non-atmospheric contribution is significant, especially in areas where baseline mercury levels are elevated. The FEIS's analysis of projected average mercury levels assumed a 40% increase in atmospheric deposition as a result of

¹¹⁴ See Environ 2015 at 25 (“The estimated Donlin tailings pond [mercury] flux is likely conservative (i.e., an over-estimate) because lower [mercury] concentrations are expected at the pond surface due to solids’ settling.”); see also Response to Comments at 26–7, DEC 000049–50.

¹¹⁵ FEIS at 3.7-151, 3.7-152 and Table 3.7-42, DEC 016369-70; Response to Comments at 24 DEC 000047.

¹¹⁶ ARCADIS, Assessment of Mercury Fate in the Environment from Changes in Atmospheric Deposition, Donlin Gold Project (June 2014) (hereinafter ARCADIS 2014), at 5 (discussing how existing sources are mercury that “naturally occurs in the soil and sediment in the region” and “atmospheric mercury”).

Project activities. Based upon this projection, the FEIS's methodology assumed that mercury levels in the streams near the mine site would also increase by 40%.¹¹⁷ This approach effectively applied the 40% increase to *both* components of the baseline mercury levels in streams--both the *atmospheric* component and the *non-atmospheric* component. In fact, only the baseline *atmospheric* component is projected to potentially experience a 40% increase during Project operations. As a result, this methodology overstates potential mercury levels in streams during mine operations, especially in areas where mercury levels are elevated due to mercury in the water column due to non-atmospheric sources such as soil erosion and stream sediment disturbances.

- e. The methodology did not account for re-volatilization or soil sequestration of mercury. Significant re-volatilization into the atmosphere of elemental mercury can be expected (33-50%), therefore reducing the potential increases.¹¹⁸

C. Monitoring, reporting, and adaptive management for mercury

- 1. Donlin's WMP incorporates by reference Donlin's Integrated Waste Management Monitoring Plan.¹¹⁹ The Monitoring Plan includes surface water quality monitoring at two locations within Crooked Creek and single locations in Anaconda Creek and Snow Gulch in the Project area where water quality effects from mercury deposition are predicted to be the highest.¹²⁰ Donlin must immediately report to the Department any exceedances of water quality standards above background conditions and, if necessary, implement corrective action to

¹¹⁷ FEIS at 3.7-151, DEC 016369.

¹¹⁸ Environ 2015 at 46.

¹¹⁹ WMP, DEC 006936; Integrated Waste Management Monitoring Plan DEC 006523-611.

¹²⁰ Integrated Waste Management Monitoring Plan, DEC 006534.

avoid future exceedances.¹²¹

2. Donlin obtained two APDES permit authorizations for the project: a Multi-Sector General Permit authorization that addresses stormwater runoff, and the individual WWTP permit for discharges from the wastewater treatment plant. Under these permits, all water discharges from the Project must comply with Alaska water quality standards.¹²²
 - a. Donlin cannot discharge contact water and stormwater to Crooked Creek until it is treated or otherwise controlled to meet water quality standards, including standards for mercury.¹²³
 - b. In addition, the WWTP permit requires surface water quality monitoring immediately upstream and downstream of the Project area. This monitoring includes monitoring for mercury content.¹²⁴
3. The ARMP requires surface water quality and sediment monitoring throughout the Crooked Creek watershed.¹²⁵ Additionally, mercury is one of the elements Donlin will monitor through sampling of juvenile fish whole body concentrations.¹²⁶ This monitoring will allow assessment as to whether mercury is causing adverse effects on aquatic life use of the watershed.¹²⁷ Monitoring results must be reported annually to ADF&G, and the ARMP requires Donlin to develop and implement corrective actions to address

¹²¹ Integrated Waste Management Monitoring Plan, DEC 006541–42.

¹²² See FEIS at 3.7-167, DEC 016385 (“effects from all project-related discharges to Crooked Creek would be treated to meet the most stringent AWQC prior to discharge”); Response to Comments at 27–28, DEC 000051–52.

¹²³ WWTP, DEC 007205–06; MSGP, DEC 007562–63.

¹²⁴ WWTP, DEC 007211–12.

¹²⁵ ARMP, DEC 006626–27.

¹²⁶ ARMP, DEC 006625–26.

¹²⁷ ARMP, DEC 006621.

documented effects, with oversight from ADF&G.¹²⁸

4. Donlin's Air Quality Control Construction Permit, issued by the Department's Division of Air Quality also addresses mercury.¹²⁹
 - a. To minimize potential point-source emissions of mercury, the permit requires installation and proper operation of stack emission controls designed for the capture and removal of mercury from the exhaust stacks of gold ore and gold concentrate processing sources (autoclaves, carbon regeneration kilns, electrowinning cells, mercury retort, and gold induction furnace).¹³⁰ These mercury control systems are required under the Clean Air Act and are designed to reduce mercury emissions to less than 25% of the emissions standard in the Act.
 - b. In addition, the permit requires implementation of Donlin's proposed Fugitive Dust Control Plan, which will limit potential releases of mercury from all fugitive emission sources at the Project site, including the Tailings Storage Facility.¹³¹

ANALYSIS

I. Burden of Proof and Standard of Review

At the outset, it is necessary to address threshold matters in the Department's administrative adjudication procedures, including the burden of proof and standard of review. In administrative hearings, the standard of proof is preponderance of the evidence and the burden of proof is on the party who requested an adjudicatory

¹²⁸ ARMP, DEC 006647-49.

¹²⁹ AQCC Permit, DEC 007823-921.

¹³⁰ FEIS at 2-23-26, DEC 015376-79.

¹³¹ AQCC Permit, Section 14, DEC 007911-19.

hearing.¹³² “To prove a fact by a preponderance of evidence, a party with the burden of proof must show that the fact more likely than not is true.”¹³³ Further, not only does the requesting party hold the burden of proving its case by a preponderance of the evidence, it also has the burden of going forward with the evidence.¹³⁴ Here, ONC is the requesting party and had the burden of proof, which it failed to carry.

With respect to the standard of review, the ALJ is correct that the Department’s regulations set no specific standards of review for this type of appeal. In the absence of a specific statute or regulation the ALJ chose to exercise his independent judgment. However, he also acknowledged that the Commissioner could defer to the Division “if the circumstances warranted.”¹³⁵ I choose to do so.

Generally, when a legal question turns on an agency’s interpretation of its own regulations, courts apply a deferential standard of review when the agency’s interpretation implicates agency expertise or raises fundamental policy considerations over matters within the agency’s discretion.¹³⁶ Further, when a court applies its

¹³² 2 AAC 64.290(e).

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ Proposed Decision at 19.

¹³⁶ *In the Matter of City of Valdez’s Objection to Assessment of Crowley Marine Services’ Property & In the Matter of City of Valdez’s Objection to Assessment*, OAH Nos. 06-0250-TAX, 06-0251-TAX (April 25, 2011) 2011 WL 11073223 (Alaska Dept. Rev.) (citing *Palmer v. Municipality of Anchorage*, 65 P.3d 832, 837 n. 7 (Alaska 2003) (explaining that courts “review an agency’s interpretation of its own regulations using [their] independent judgment, so long as that interpretation does not implicate the agency’s area of expertise or questions of fundamental policy committed to the agency’s discretion.”

independent judgment to a question of interpretation, it may defer to an agency’s long-standing interpretation. ¹³⁷

“A commissioner or final decisionmaker is never bound to defer to staff, however.”¹³⁸ “[A]ccording deference by rote to subordinates may be contrary to the purpose of allowing an executive branch appeal.”¹³⁹ Often when a particular interpretation question does not require the subject-matter expertise of staff making intermediate decisions, deference is not needed. Yet, even if not required, “a measure of practical ‘due deference’ is often extended as a matter of good administrative practice.”¹⁴⁰

Though not strictly applicable to reviews wholly internal to the executive branch, judicial standards of review may be instructive. Since they are used when courts review final executive branch actions, an executive branch reviewer making such a final decision may wish to look through a similar lens when reviewing an intermediate executive branch decision by a subordinate.

¹³⁷ *Id.*

¹³⁸ *In the Matter of City of Valdez's Objection To Assessment of Crowley Marine Services' Property In the Matter of City of Valdez's Objection To Assessment of Prince William Sound Oil Spill Response Corp.'s Property*, 2011 WL 11073223, at *5.

¹³⁹ *Id.* Citing to *In re Alaska Medical Development—Fairbanks, LLC, Kobuk Ventures, LLC, and Fairbanks Memorial Hospital*, OAH Nos. 06-0744-0746-DHS at 6.

¹⁴⁰ *See, e.g., Quality Sales Foodservice v. Dep’t of Corrections*, OAH No. 06-0400-PRO., Decision and Order at 11-12 (Dep’t of Administration 2006); *In re Waste Management of Alaska, Inc.*, Case No. 01-08, Decision at 9-13 (Dep’t of Administration 2002).

In the Matter of City of Valdez is instructive in this instance. There, where the proceeding similarly lacked specific standards of review prescribed by law or regulation in making a determination, the ALJ discussed the standard of review the commissioner was to apply:

[I]f the final decisionmaker is reviewing an intermediate decision that depends on expertise of the subordinate, the final decisionmaker may wish to defer to that expertise, both because that may be the best way to ensure that proper expertise is brought to bear upon the matter and in anticipation that a reviewing court might look through the final decision to the use of expertise by the subordinate. Borrowing from the judicial standards of review, therefore, the commissioner could, and possibly should, defer to the division's interpretation of the relevant regulation if the special [] expertise of the division were implicated by the interpretation question.¹⁴¹

Here, the expertise of the Division is indeed needed to interpret and implement its guiding statutes and regulations. Water quality and antidegradation expertise is certainly required to determine whether there is reasonable assurance that state water quality standards will not be violated. Moreover, as the principal executive officer of the Department, I have the authority to organize the Department into Divisions, to adopt regulations, and to appoint subordinates. As such, I am entitled to, and possibly should, give due consideration to the Division's interpretation of Department regulations.

II. Applicable Law

Under the applicable rule, in the § 401 certification process, the state agency is required to include a “statement that there is reasonable assurance that the activity will be

¹⁴¹ *Id.*

conducted in a manner which will not violate applicable water quality standards,”¹⁴² and a “statement of any conditions which the certifying agency deems necessary or desirable with respect to the discharge of the activity.”¹⁴³

Yet, absolute certainty is not required in making a reasonable assurance determination. Indeed, the state is not required “to provide absolute certainty that permittees will never violate state standards, assuming this sort of guarantee is even possible.”¹⁴⁴ Instead, the state agency with the discretion to issue a Certificate “is only required to provide a ‘reasonable assurance’ that the activity will be conducted in a manner that will not violate applicable water quality standards.”¹⁴⁵ The § 401 certification must address future events and the likelihood that those events will result in violations of water quality standards.

While federal rules do not explicitly define reasonable assurance, the State of Washington has described it as “something [that] is reasonably certain to occur.”¹⁴⁶ Specifically, in *Port of Seattle*, a case the parties and ALJ rely upon heavily, Washington’s Pollution Control Hearing Board provided that “reasonably certain to occur” means “[s]omething more than a probability; mere speculation is not sufficient.”

¹⁴² 40 CFR 121.2(a)(3) (2019).

¹⁴³ 40 CFR 121.2(a)(4) (2019).

¹⁴⁴ *Miners Advocacy Council, Inc. v. State, Dept. of Environmental Conservation*, 778 P.2d 1126, 1138 (Alaska 1989).

¹⁴⁵ *In Re: Certification of the 1989 and 1990 NPDES Placer Mining Permits For Alaska*, 1991 WL 574966, at *13 (citing *Miners Advocacy Council* at 11383).

¹⁴⁶ *Port of Seattle v. Pollution Control Hearings Bd.*, 90 P.3d 659, 676 (Wash. 2004).

In elaborating, the board provided that “[c]learly, the ‘reasonable assurance’ standard does not require absolute certainty. The inherent predictive nature of a § 401 certification cannot be avoided.”¹⁴⁷

III. Analysis

A. The Division is not required to analyze compliance based on worst case scenarios.

In *Miners Advocacy Council*, where the Alaska Supreme Court upheld the Department’s certification of draft NPDES permits issued to placer gold mines, the Court focused on the original hearing officer’s conclusions rejecting the challenger’s assertions. There, where the permit challengers argued more stringent effluent limits and site-specific verifications were necessary to assure compliance with water quality standards, the Court agreed with the hearing officer’s conclusion that “assumptions underlying such an approach are not reasonable” and that arguments for assuming “a worst case scenario in every case and ignor[ing] reasonable assumptions” are flawed “when applied to the real world and actual mining sites.”¹⁴⁸

Further, the Court held that in making a reasonable assurance certification, the Department is not *guaranteeing* that there will never be an exceedance.¹⁴⁹ Quoting the hearing officer further, who declined to interpret reasonable assurance “to mean that DEC has assured that there will never be an incident where a discharge from a placer

¹⁴⁷ *Id.*

¹⁴⁸ *Miners Advocacy Council*, 778 P.2d at 1136.

¹⁴⁹ *Id.*

mining site in the state” exceeds effluent limits, the Court validated the premise that certificates of reasonable assurance must be more reasonably interpreted.¹⁵⁰ Thus, the court upheld the hearing officer’s decision that the reasonable assurance test is met if the Department can “certify that a limitation reasonably assures compliance with state water quality standards”¹⁵¹

Instead, here the ALJ’s proposed decision does adopt the challenger’s worst-case scenarios. For mercury, the proposed decision disregards the Division’s determination that the multiple conservative inputs into the mercury modeling performed by the FEIS do not accurately reflect the considerations required for § 401 certification. In its temperature analysis, the proposed decision would have the Division use the highest recorded temperature over a six-year study as the baseline for analysis. For existing uses, the proposed decision focuses on individual fish rather than the Division’s focus on the fish population as a whole in the watershed.

B. The “potential” wording in the FEIS does not satisfy ONC’s burden of proving violation of an applicable standard is likely.

The proposed decision mischaracterizes report findings. For example, the FEIS states that the Project “*could* cause stream temperatures in reaches near the mine to be *close to or above Alaska’s water quality temperature standard* of 55.4° F for egg/fry incubation and spawning and 59.0° F for migration and rearing.”¹⁵² Yet, while the FEIS

¹⁵⁰ *Id.*

¹⁵¹ *Id.* at 1137.

¹⁵² FEIS at 3.13-112, DEC 17040 (emphasis added).

makes no definitive finding on this issue, the proposed decision does. More perplexing is that when reiterating the FEIS conclusion, the proposed decision characterizes the Project as “likely” to violate water quality standards for temperature, where the language used in the FEIS is “could.”¹⁵³ Webster’s Dictionary defines likely as “having a high probability of occurring or being true; very probable”¹⁵⁴ whereas the word “could” indicates an unspecified or uncertain level of uncertainty.

Further, the proposed decision states that violations are “predicted” in the FEIS.¹⁵⁵ Yet, to the extent that any data supports the conclusion that water temperatures during mine operations would be “close to” the levels set by water quality standards, these conclusions are not based on evidence in the record, and ONC did not produce any evidence to support such predictions. As such, the data is insufficient to allow for predictions.

The proposed decision misleadingly pulls singular quotes out of the FEIS and adopts them as determinative. This is a policy decision that the proposed decision makes, which is contrary to the policy decision implemented by the Division. Yet, it is the Department, and the Division under its guidance, that has the authority to dictate and discretion to implement policy decisions. Here, the Department maintains the discretion to decide what data to rely on in making its determinations. It is not required to utilize

¹⁵³ Proposed Decision at p. 46.

¹⁵⁴ Merriam-Webster’s Dictionary, <https://www.merriam-webster.com/dictionary/likely> (last visited May 21, 2021).

¹⁵⁵ *Id.* at 52, 53.

data only from the FEIS. The Division may review the FEIS, and the data and studies supporting the FEIS, but the Division is not restricted to reliance solely on the statements made, and conclusions reached, in the FEIS. The Division may consider those statements and conclusions, but is not required to rely exclusively on them. Indeed, under regulatory guidance and statutory authority, the Division with its subject-matter experts may appropriately make its determinations from thorough analyses of multiple sources of data.

Finally, I disagree with, and reject, the proposed decision's characterization of the FEIS findings. To the extent that any data supports the conclusion that water temperatures during mine operations would be "close to" the levels set by water quality standards, the data is insufficient to support the proposed decision's conclusion that the Division lacked reasonable assurance of compliance. Instead, the proposed decision elevates data from the FEIS, which was prepared for purposes other than certifying Donlin Gold's Certificate by federal entities, above analyses and conclusions made by the state agency charged with upholding and enforcing the state's water quality standards. Moreover, the proposed decision treats the FEIS as binding on the Division in making its § 401 certification.

C. The Division's policy choice with a watershed approach is appropriate.

Contrary to the proposed decision, the Division's use of the FEIS's watershed analysis is appropriate. The Division appropriately made a specific policy choice to use the watershed approach to evaluate this project. Among other reasons, the FEIS analysis was conducted on a watershed basis, and while the FEIS and the Certificate may have

slightly different purposes, both aim to analyze potential effects of the Project. The Division's application of the watershed analysis was appropriate and within its discretion.

However, with no support in regulation or the Division's precedent in other matters, the proposed decision utilizes an "area of impact" approach, which requires looking only at the specific geographic area next to or directly downstream of the project. Taking that approach would be an exceptionally conservative policy decision which would impose an extremely limited evaluation of impacts. Moreover, that approach fails to consider the overall Project, the continuing nature of those effects outside the "area of impact," and the overall biological health of the waterbody. Thus, the Division appropriately used its discretion to make a reasoned policy decision by looking at the Project through the lens of the watershed approach.

D. Reasonable assurance of compliance of with mercury standards.

ONC first asserts that the Division has not demonstrated reasonable assurance that construction and operation of the Project will comply with Alaska's water quality standards for mercury. This assertion is based largely on statements pulled from the FEIS. Specifically, ONC's pulls figures from past water studies and concludes, without additional evidence to rebut the Division's finding of reasonable assurance, that it is "all but certain there will be violations of the water quality standard for mercury."¹⁵⁶ Furthermore, ONC argues that the Division has failed to establish reasonable assurance by not offering any new data or studies to contradict the FEIS.

¹⁵⁶ ONC Brief at 11.

Environmental Impact Statements evaluate *potential* impacts and are often overly inclusive, but the Division is not limited to information provided in an EIS in making its decision: it has access to a host of data its experts may utilize in making informed decisions within its statutory discretion. Moreover, the Division is not required to put forth additional evidence to prove that it has reasonable assurance. Indeed, the Division is not required to prove anything at this stage. Instead, it is ONC who has the burden to prove by a preponderance of evidence that the Division does not have reasonable assurance that the Project will not violate water quality standards. ONC has failed to produce more than assertions, opinions, or conclusions to rebut the Division's findings and has thus failed to meet its burden to prove by a preponderance of the evidence that reasonable assurance does not exist.

E. Reasonable assurance of compliance with temperature standards.

ONC's second claim is that the Division has not demonstrated reasonable assurance that construction and operation of the Project will comply with Alaska's water quality standards for temperature. Similar to its claims pertaining to mercury above, ONC's claims rely on assertions that characterize certain predictions in the FEIS as conclusive. Further, ONC argues that "the Division has offered no new data or studies to contradict the EIS's conclusions about temperature based on years of study."¹⁵⁷ Again, for the reasons provided above, ONC has failed to meet its burden to prove by a preponderance of the evidence that reasonable assurance does not exist.

¹⁵⁷ ONC Brief at 17-18.

F. Reasonable assurance of compliance with existing uses standards.

ONC’s third claim is that the Division has not demonstrated reasonable assurance that construction and operation of the Project will fully protect existing uses. With § 401 certification, states are required to certify that the permittee will comply with state standards by including a statement in its certificate that “there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.”¹⁵⁸ Alaska’s applicable water quality standards, “are set by the antidegradation policy in 18 AAC 70.015, the water quality criteria in 18 AAC 70.020(b), and the limits in 18 AAC 70.030, applied in accordance with [18 AAC 70.005 - 18 AAC 70.050].”¹⁵⁹

In implementing Alaska’s antidegradation policy, the Department is required to conduct an antidegradation analysis and make findings for discharges “subject to authorization by the department under [] 18 AAC 83 (Alaska Pollutant Discharge Elimination System (APDES) Program); and [] 33 U.S.C. 1341 (Clean Water Act, sec. 401) water quality certifications.” When conducting this antidegradation analysis,

...if the quality of water exceeds levels necessary to support the propagation of fish, shellfish, and wildlife and recreation in and on that water...that quality must be maintained and protected unless the department, in its discretion...allows the reduction of water quality...for another purpose as authorized in the department permit, certification, or approval; the department will authorize a reduction in water quality only after...the department finds that... (A) allowing lower water quality is necessary to accommodate important economic or social development in the area where the water is located;

¹⁵⁸ 40 C.F.R. § 121.2(a)(3) (2019).

¹⁵⁹ 18 AAC 70.010(b).

(B) except as allowed under this subsection, reducing water quality will not violate the applicable criteria of 18 AAC 70.020 or 18 AAC 70.025 or the whole effluent toxicity limit in 18 AAC 70.030; (C) the resulting water quality will be adequate to fully protect existing uses of the water; and (D) all wastes and other substances discharged will be treated and controlled to achieve (i) for new and existing point sources, the highest statutory and regulatory requirements; and (ii) for nonpoint sources, all cost-effective and reasonable best management practices...¹⁶⁰

Clearly, this required antidegradation analysis is not limited solely to whether existing uses will be fully protected. Instead, the Division is required to, among others, balance important economic or social development with the full protection of existing uses. Yet, the existing uses element is the only element of the analysis ONC focuses on in its challenge.

Here, after a thorough antidegradation analysis was conducted, it *was* determined that existing uses of the water would be fully protected.¹⁶¹ ONC, however, relies on assertions that the FEIS, which was not conducted under the state's antidegradation regulatory scheme, concludes otherwise. But, under the state's antidegradation analysis and implementation policy, no authority exists to support a contention that an EIS prepared by the Army Corps of Engineers pursuant to federal law encompasses all of the evidence that the state may consider or that the state is limited only to reviewing FEIS data in making its determinations.

¹⁶⁰ 18 AAC 70.015.

¹⁶¹ See Memorandum, Antidegradation Analysis – Donlin Project, POA-1995-120 (updated), DEC 000001-14.

The detailed analysis of data specified in the state’s antidegradation implementation method requires § 401 certification applicants to submit “sufficient information”, including “parameters of concern in the discharge and the respective concentrations, persistence, and potential impacts to the receiving water”, “data on parameters that may alter the effects of the discharge to the receiving water”, and “any additional information as requested by the department.”¹⁶² As the state agency charged with setting antidegradation policies and conducting antidegradation analyses prior to issuing a Certificate, it makes little sense that the Division would be limited to data dictated by the federal government under federal regulatory schemes. As such, the Division, under the direction of the Department, may choose to evaluate *all* relevant evidence in making its determination.

ONC argues that the Division has offered no new data or studies to contradict the FEIS. Again, however, the burden is on ONC to prove by a preponderance of the evidence that the Division does not have reasonable assurance and, again, ONC has failed to meet this burden.

G. Reliance on permits is appropriate.

Finally, the ALJ’s determination that reasonable assurance did not exist was based on a strict reading and interpretation of what and how many conditions must attach to a Certificate for an issuing state agency to be reasonably assured. This interpretation purports to require a nexus between the Certificate, other permits already issued to

¹⁶² 18 AAC 70.016(5).

Donlin Gold, and the Division’s ability to remedy those issues if and when exceedances occur. Specifically, it provides that a “strong nexus between detailed conditions contained and referenced in the certificate itself and the remedies that could be invoked if standards are exceeded, is exactly what existed in *Port of Seattle*.”¹⁶³

Further, the proposed decision suggests that it is improper for the Division to rely on the terms of other permits in concluding the Certificate provides reasonable assurance of compliance with water quality standards. This arises with Donlin’s ARMP, enforceable by ADF&G, and a number of air and water permits that are overseen by ADEC. *Port of Seattle* recognized that when the certifying agency assesses “reasonable assurance,” it is acceptable for the certifying agency to rely on provisions in other permits that govern the activity (in that case, provisions in an NPDES water discharge permit).¹⁶⁴

The Proposed Decision attempts to distinguish *Port of Seattle* by noting that other permits in the Project are “dissimilar.”¹⁶⁵ Permits address different media, such as air, wastes, water, and circumstances, and the fact that they may be “dissimilar” does not undermine a conclusion by the Division that it, the Department, or another state agency will enforce the permits in question. In fact, as a policy matter it is preferable to have ADF&G, the agency charged by the legislature with the protection of fish and game, remain primarily responsible for enforcing fish protection measures. As such, the ARMP

¹⁶³ Proposed Decision at 32.

¹⁶⁴ 90 P.3d 659.

¹⁶⁵ Proposed Decision at 33.

and permits issued by ADEC are relevant to the Division's overall assessment of the Project's compliance with water quality standards, and the Division is not necessarily precluded from relying on permit oversight and enforcement from ADF&G, other divisions in ADEC, and other agencies.

And, while *Port of Seattle* is instructive, it is not controlling. While it was appropriate in that matter for the certificate at issue to reference specifics of monitoring and contingency plans, including how to avoid exceedances, I disagree that these, along with "specifics of what will occur if exceedances take place, including the potential for the ultimate enforcement remedy of certificate revocation"¹⁶⁶ are absolutely necessary with every Certificate in order for reasonable assurance to exist.

The Clean Water Act of 1977 anticipates that changes may occur in the water quality after a project has been certified, and it provides the Department with a mechanism to take action. The Act provides for continuous monitoring of a Certificate contemplating revisions subsequent to the issuance of the § 401 certification and notice by the issuing state if there is no longer reasonable assurance of compliance with the substantive provisions of the Clean Water Act because of changes in "(A) the construction or operation of the facility, (B) the characteristics of the water into which such discharge is made, (C) the water quality criteria applicable to such waters or, (D) applicable effluent limitations or other requirements."¹⁶⁷

¹⁶⁶ *Id.*

¹⁶⁷ 33 U.S.C.A. § 1341(a)(3).

Furthermore, 33 U.S.C. § 1341(d) provides that “[a]ny [Section 401] certification ... shall become a condition on any Federal license or permit subject to the provisions of this section.” As such, violations of conditions placed on the Certificate would subject the § 401 certificate holder to both state and federal enforcement mechanisms and would themselves be violations of state and federal law.

While the Certificate issued to Donlin Gold does have conditions attached, violations of which would be subject to state and federal enforcement, states have the option of including conditions necessary to achieve reasonable assurance. But, conditions are not mandated by the Act. Indeed, a state has four options when receiving applications for § 401 certification: “it may grant a certificate without imposing any additional conditions; grant it with additional conditions; deny it; or waive its right to participate in the process.”¹⁶⁸ The Act merely requires that if a state grants a Certificate, with or without conditions¹⁶⁹, the Certificate must contain “[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.”¹⁷⁰

¹⁶⁸ *Sierra Club v. State Water Control Board*, 898 F.3d 383, 388 (C.A.4 (Va.), 2018); *See Delaware Riverkeeper Network*, 833 F.3d at 376 (noting states’ options to deny certificate or to waive right to participate); *see also S.D. Warren Co. v. Maine Bd. of Env’tl. Prot.*, 547 U.S. 370, 380 (2006) (“Section 401 ... was meant to continue the authority of the State to act to deny a permit and thereby prevent a Federal license or permit from issuing to a discharge source within such State.” (alterations and internal quotation marks omitted)).

¹⁶⁹ *Sierra Club* at 388.

¹⁷⁰ 40 C.F.R. § 121.2(a)(3) (emphasis added); *see PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 712, (1994).

In *Sierra Club v. State Water Control Board*, several environmental groups challenged the state of Virginia’s issuance of a § 401 certification where the state had determined it had reasonable assurance that construction of a natural gas pipeline would not violate state water quality standards.¹⁷¹ There, the court found that it was reasonable for the state to conclude it had reasonable assurance because the state agency, “like the EPA would be able to use the tools at its disposal to adjust to any unexpected contingencies that may lead to a short-term exceedance.”¹⁷² Moreover, the court provided “§ 1341(d) plainly contemplates a state requiring water monitoring as a basis for its reasonable assurance certification” in determining that reliance on such monitoring would not be an arbitrary or capricious determination of reasonable assurance.¹⁷³

Like in *Sierra Club*, a significant basis for the Division’s reasonable-assurance certification was the existence of monitoring requirements that would allow the Division to make prompt adjustments if samples reveal exceedances of water quality standards. Following this approach, the monitoring plan was crafted to protect against any degradation of water quality from the Project, without regard to what particular activities, combination of activities, or naturally-occurring conditions are the cause of such exceedances. This power of the Department, through the Division, to

¹⁷¹ 898 F.3d 383 (C.A.4 (Va.), 2018).

¹⁷² *Id.* at 404-405.

¹⁷³ *Id.* (citing to 33 U.S.C. § 1341(d) (“Any certification provided under this section shall set forth any ... monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable ... limitations ... and with any other appropriate requirement of State law set forth in such certification.”) (*See also Port of Seattle*, 90 P.3d at 678.).

continuously monitor projects and to notify the permitting agencies of changes in water quality so that an investigation can be held should provide adequate protection to the public health, safety and welfare of the people of the State of Alaska.

CONCLUSION

Because I find the Division's decision is supported by a reasonable basis in law and substantial evidence in the record,¹⁷⁴ I reject the positions advanced by the other parties. In contesting the Department's issuance of a Certificate, ONC bears the burden of proving by a preponderance of evidence that the Division does not have reasonable assurance that state water quality standards for mercury, temperature, and existing uses will be protected. In determining whether ONC has met this burden and whether reasonable assurance exists, I find it appropriate to defer to the Division's expertise in its analysis of the relevant data and information from the record.

In this matter, ONC cherry-picked portions of the record describing *potential* impacts in a highly technical report and characterized them as conclusive. The Division consistently and thoroughly rebutted each of ONC's assertions with analysis of relevant

¹⁷⁴ On pages 21-23 in the ALJ's proposed decision under "Documentation appropriately considered," the issue of ONC's challenge to documents it construes as "extra-record documents" is addressed. After analysis, the proposed decision finds ONC cannot claim it will suffer prejudice from, and finds good cause exists, for consideration of these documents. This issue was raised for the first time in ONC's reply brief, yet in the parties' proposals for action no party made arguments for or against consideration of these documents. Importantly, ONC's proposal for action provides that the proposed decision "is the result of thorough review of the extensive agency record and parties' briefs" and that it "is well supported and sound in its reasoning" and as such asks for adoption of the ALJ's proposed decision. As to this issue, ONC has lost its right to object to consideration of these documents. In the interest of creating a clean and comprehensive record, I adopt the ALJ's conclusion that these documents may be considered.

information and data using its subject-matter expertise. Consequently, ONC has failed to meet its burden and there is no need to return the matter to the Division for further review and analysis.

For the foregoing reasons, ONC's request to rescind the Certificate issued to Donlin Gold is DENIED; the Division's issuance of the Certificate to Donlin Gold is UPHELD.

This is a final agency decision. It may be appealed to the superior court within 30 days from the date of this order.¹⁷⁵

¹⁷⁵ AS 44.62.560.

Non-Adoption Options

A. The undersigned in accordance with AS 44.64.060(e)(2), declines to adopt this Decision, and instead orders under AS 44.64.060(e)(2) that the case be returned to the administrative law judge to

take additional evidence about _____;

make additional findings about _____;

conduct the following specific proceedings: _____.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

B. The undersigned, in accordance with AS 44.64.060(e)(3), revises the enforcement action, determination of best interest, order, award, remedy, sanction, penalty, or other disposition of the case as set forth below, and adopts the proposed decision as revised:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this 27th day of May, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

C. The undersigned, in accordance with AS 44.64.060(e)(4), rejects, modifies or amends one or more factual findings as follows, based on the specific evidence in the record described below:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this 27th day of May, 2021.

By: 
Jason Brune, Commissioner
Department of Environmental Conservation

D. The undersigned, in accordance with AS 44.64.060(e)(5), rejects, modifies or amends the interpretation or application of a statute or regulation in the decision as follows and for these reasons:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this 27th day of May, 2021.

By: 
Jason Brune, Commissioner
Department of Environmental Conservation



THE STATE
of **ALASKA**
GOVERNOR MICHAEL J. DUNLEAVY

Department of Environmental
Conservation

DIVISION OF WATER

Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/water/wwdp

April 5, 2019

Donlin Gold, LLC
Attention: Andy Cole
4720 Business Park Blvd, Suite G-25
Anchorage, AK 99503

Re: Donlin Gold, LLC, Donlin Gold Mine
POA-1995-120, Crooked Creek

Dear Mr. Cole:

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation (DEC) is reissuing the enclosed Certificate of Reasonable Assurance for placement of dredged and/or fill material in waters of the U.S., including wetlands and streams, associated with the development of a gold mine 10 miles north of the village of Crooked Creek, Alaska.

DEC regulations provide that any person who disagrees with this decision may request an informal review by the Division Director in accordance with 18 AAC 15.185 or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. An informal review request must be delivered to the Director, Division of Water, 555 Cordova Street, Anchorage, AK 99501, within 20 days of the permit decision. Visit <http://dec.alaska.gov/commish/review-guidance/> for information on Administrative Appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department of Environmental Conservation, PO Box 111800, Juneau, AK 99811-1800, Location: 410 Willoughby Avenue, Suite 303, Juneau within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived.

By copy of this letter we are advising the U.S. Army Corps of Engineers of our actions and enclosing a copy of the certification for their use.

Sincerely,

Handwritten signature of James Rypkema in black ink.

James Rypkema
Program Manager, Storm Water and Wetlands

Enclosure: 401 Certificate of Reasonable Assurance

cc: (with enclosure via email)
Dan Graham, Donlin Gold
Shelia Newman, USACE Anchorage
Calvin Alvarez, USACE Anchorage
Faith Martineau, ADNR

Megan Marie, ADF&G
USFWS Field Office Anchorage
Matthew LaCroix, EPA Operations, Anchorage



**STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE OF REASONABLE ASSURANCE**

In accordance with Section 401 of the Federal Clean Water Act (CWA) and the Alaska Water Quality Standards (18 AAC 70), a Certificate of Reasonable Assurance, is reissued to Donlin Gold, LLC, attention: Andy Cole, at 4720 Business Park Blvd, Suite G-25, Anchorage, Alaska 99503, for placement of dredged and/or fill material in waters of the U.S. including wetlands and streams in association with the development of a gold mine located 277 miles west of Anchorage, 145-miles northeast of Bethel, and 10 miles north of the village of Crooked Creek in the Kuskokwim watershed. The activities covered under this certification are further described in the attached project summary.

A state issued water quality certification is required under Section 401 because the proposed activity authorized by a Department of Army (DA) permit (POA-1995-120) may result in the discharge of pollutants to waters of the U.S. located in the State of Alaska. The department publically noticed its intent to issue a CWA §401 Certificate from June 13, 2018 to July 13, 2018.

Donlin Gold submitted a Preliminary Section 404 and Section 10 permit application to the USACE in July 2012. Donlin Gold revised the application in December 2014, August 2015, and December 20, 2017. The December 2017 application includes revisions and refinements to the project design and footprint resulting, in part, from the National Environmental Protection Act process review, and supersedes all previous applications. The DA permit requires compensatory mitigation for the direct impacts to waters of the U.S., including wetlands.

State Certification and Conditions

The Department of Environmental Conservation (DEC) reviewed the application and certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70, provided that the following additional measures are adhered to.

1. Reasonable precautions and controls must be used to prevent incidental and accidental discharge of petroleum products or other hazardous substances. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Central Alaska at (907) 269-3063 during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.

3. If the industrial activity of this project includes storm water discharges associated from mineral or metal mining, or open-cut gravel quarries, the permittee will need to obtain additional discharge coverage from an appropriate Alaska Pollutant Discharge Elimination System (APDES) permit. Further information in regards to the Multi-Sector General Permit (MSGP) authorization, please see <http://dec.alaska.gov/water/wastewater/stormwater/MultiSector.aspx> and/or contact William Ashton, 907-269-6283, William.Ashton@alaska.gov for more information. The applicant currently has received an APDES MSGP authorization (AKR06AA92) for storm water discharges.
4. All surface runoff from areas disturbed during the stripping of overburden or moving of existing overburden piles shall be diverted to existing mine cuts or stabilized areas, such as settling ponds, using berms, diversion channels, or brush barriers. Surface runoff containing sediment from disturbed areas shall not be discharged without treatment into any water body.
5. Construction equipment shall not be operated below the ordinary high water mark if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment shall be inspected and recorded in a log on a daily basis for leaks. If leaks are found, the equipment shall not be used and pulled from service until the leak is repaired.
6. For culverts that carry waters that are discharging or will discharge into fish-bearing waters, installation shall not occur within the flowing waters of the stream. Culvert installation techniques such as stream diversion, dam and pump, or stream fluming shall be incorporated into the installation activity to insure that silt laden water is not carried into sensitive fish habitat.
7. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be clearly delineated and marked in such a way that equipment operators do not operate outside of the marked areas.
8. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include: gulying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.
9. If a BMP is not working properly (for instance, sediment runoff) corrective measures shall be implemented as soon as possible.
10. A minimum 50-foot wide, vegetated buffer zone should be maintained between a snow storage area and any surface water bodies. This distance could be decreased if adequate stormwater/sediment catchment basins, coarse gravel berms, or sediment traps/barriers/filters are built to reduce impacts on surface water bodies from snowmelt that may potentially run off from these sites.

11. Accumulated trash and debris need to be removed from the snow storage area in the spring as they become visible when the snow melts. This may need to be done several times over the course of the summer as the snow piles continue to melt. Wastes and litter that become uncovered as the snow melts need to be picked up before off-site migration of the waste becomes a problem.

DEC reserves the right to modify, amend, or revoke this certification if DEC determines that, due to changes in relevant circumstances – including without limitation, changes in project activities, the characteristics of the receiving water bodies, or state water quality standards (WQS) – there is no longer reasonable assurance of compliance with WQS or other appropriate requirements of state law.

This certification expires August 31, 2038. If your project is not completed by then and work under USACE Permit will continue, or for a modification of the USACE permit, you must submit an application for renewal of this certification at least 30 days before the expiration date or any deadline established by USACE for certification action on the modification, or 30 days before the proposed effective date of the modification, whichever is sooner.

Date: April 5, 2019



James Rypkema, Program Manager
Storm Water and Wetlands

ATTACHMENT 1
Project Summary for Donlin Gold, LLC, Donlin Gold Mine
POA-1995-120, Crooked Creek

Donlin Gold, LLC proposes the development of an open-pit, hard-rock gold mine in the Kuskokwim River watershed, 277 miles west of Anchorage, 145 miles northeast of Bethel, and 10 miles north of the community of Crooked Creek in the Kuskokwim watershed. There is no existing overland year-round access to the site or utility service to supply the mine.

The mine site is located at latitude 62.0179° N, longitude 158.1884°W, 277-miles west of Anchorage and 10-miles north of Crooked Creek village. The river port (Jungjuk) is located on the north bank of the Kuskokwim River approximately 9-river miles south of Crooked Creek village at 61.7952° N, 158.2142° W. The mine site airstrip is located approximately 15.5-miles northwest of Crooked Creek village at 62.0319°N, 158.2351°W. The natural gas pipeline would tie in near the community of Beluga at 61.2694° N, 150.9017°W.

The proposed Donlin Gold Project includes land leased from Calista Corporation (Calista), The Kuskokwim Corporation (TKC) and CIRI Inc. All three are Alaska Native Claims Settlement Act (ANCSA) regional corporations. The remainder of potentially affected lands (principally pipeline impacts) are owned primarily by the State of Alaska or U.S. Bureau of Land Management (BLM).

1 Request for Clean Water Act Section 401 Certification

Donlin Gold, LLC's request to the Department of Environmental Conservation (Department) for a Clean Water Act (CWA) §401 certificate references its application to the U.S. Army Corps of Engineers (USACE) for a CWA §404 permit and the *Donlin Gold Project Final Environmental Impact Statement* (FEIS)¹. The §404 application and the FEIS encompass the construction and operation of the Donlin Gold Project including the proposed mine site, transportation corridor, and pipeline. The USACE and BLM issued the *Donlin Gold Project Joint Record of Decision and Permit Evaluation* (JROD)² on August 13, 2018. Attachment B2 of the JROD is the *Evaluation of the Discharge of Dredge and Fill Material in Accordance with 404(B)(1) Guidelines (40 CFR Section 230, Subparts B through H)* and considers the construction and operation of the Donlin Gold Project in order to determine the least environmentally damaging practicable alternative.

Pursuant to Section 10 of the River Harbors Act of 1899 in the United States Code (U.S.C.) at 33 U.S.C. 403 and Section 404 of the CWA (33 U.S.C. 1344), the US Army Corps of Engineers (USACE) issued Department of Army Permit #POA-1995-120 (DA Permit) on August 13, 2018 to Donlin Gold, LLC for the discharge of fill material into waters of the U.S., including wetlands, and the construction of structures in and under navigable waters. The DA Permit authorized the proposed action, Alternative 2, which incorporates the North Route Pipeline

¹ All FEIS citations are to the version posted at <http://dnr.alaska.gov/mlw/mining/largemine/donlin/pdf/dgfeis.pdf>. Note that the pagination in the online version does not always match the pagination in the hard copy version.

² USACE BLM JROD, accessible at <http://dnr.alaska.gov/mlw/mining/largemine/donlin/pdf/dg-usace-blm-rod-2018-08-13.pdf>.

option as detailed in the FEIS. This alternative was determined to incorporate all practicable avoidance and minimization measures.³

2 Project Components and Fill Activities

Major project components include the proposed mine site, transportation corridor, and pipeline. See the FEIS for a detailed description of the project. The construction of all project components (mine site, transportation corridor, and pipeline) will result in the discharge of 4,368,300 cubic yards (cy) of fill material, permanently impacting 2,877 acres of wetland, 3 acres of fill below the ordinary high water mark (OHWM) of the Kuskokwim River, and 172,944 linear feet of stream, and temporarily impacting 538 acres of wetland and 53,346 linear feet of stream.

The project would have an average process throughput of 59,000 tons of ore per day, an estimated operational life of 27 years, and would produce approximately 30 million ounces of gold. Construction of the project would take three to four years. Final reclamation and closure activities will take six years post operations. Approximately 45 years post-reclamation (51 years post operations) the mine pit will fill and there will be need for treatment in perpetuity of the wastewater discharged from the mine pit.

The three major project components are summarized as follows:

2.1 Mine Site

The proposed mine site is located entirely within the Crooked Creek watershed of the Kuskokwim River. All proposed mine-related facilities are located in areas that drain to tributaries of Crooked Creek, including American, Anaconda, Lewis, and Queen creeks, and Omega and Snow gulches, all of which flow west into Crooked Creek. The mine site construction will result in the discharge of 2,943,005 cy of fill material, resulting in the permanent loss of 2,572 acres of wetland and 171,100 linear feet of stream. The primary project subcomponents of the mine site include Donlin-Jungjuk road (east of Crooked Creek), laydown areas, mine internal roads, north and south overburden stockpiles, open pit, Snow Gulch freshwater reservoir, tailings storage facility, treated water discharge facility, material sites and stockpiles, and waste rock facility.

2.2 Transportation Corridor

The transportation corridor construction will result in the discharge of 156,280 cy of material, resulting in the permanent impact to 105 acres of wetland, three acres below the OHWM of the Kuskokwim River, and 1,844 linear feet of stream. The primary project subcomponents of the transportation corridor include a port facility at Angyaruaq (Jungjuk), a 30-mile mine access road from the port (west of Crooked Creek), a 5,000 foot airstrip, airstrip spur road, material sites.

2.3 Pipeline

The pipeline construction will result in the discharge of 1,269,015 cy of material, resulting in the permanent loss of 200 acres of wetland and temporary impacts to 538 acres of wetland and 53,346 linear feet of stream. The pipeline component includes the construction of a 14-inch-

³ [JROD, 2-1](#)

diameter steel pipeline to transport natural gas approximately 316 miles from an existing 20-inch gas pipeline tie-in near Beluga, Alaska to the mine site power plant. Natural gas will be supplied to the pipeline from existing Cook Inlet infrastructure. The pipeline will require one compressor station at milepost 0.4. An associated fiber optic line will be installed in the right-of-way corridor parallel to the natural gas pipeline for operational needs and communications. The primary project subcomponents of the pipeline include access routes, airstrips, block valves, work camps, horizontal directional drill workspace, material sites, pipeline storage yards, pipeline, water extraction sites, and work pads.

3 Regulatory Plans

A detailed compensatory mitigation plan is part of the DA permit. Highlights include:

- Restore and preserve approximately 102-acres of wetlands and riparian areas with 8,501-linear feet (1.61-miles) of stream, and establish another 71- acres of riparian preservation buffers, in historic placer mining areas in the Upper Crooked Creek watershed (within the HUC-10 of the mine site).
- Preserve a total of 5,888-acres of important and productive habitat, of which it is estimated 2,558 acres are wetland and ponds, with an additional 3,330-acres of riparian areas, stream area, and buffers, and 228,325-linear feet (43.24-miles) of streams in the Chuitna watershed.