

**Department of Environmental Conservation
Response to Comments**

For

Coeur Alaska, Inc., Kensington Mine

APDES Permit No. AK0050571

Public Noticed March 7, 2017 – April 6, 2017

April 28, 2017



**Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501**

1 Introduction

1.1 Summary of Facility / Permit

Kensington Mine, operated by Coeur Alaska, Inc. (Coeur), is an underground gold mine that has been in production since 2010. The facility processes an average of 1,250 tons of ore per day. Kensington produced over 125,000 ounces of gold in 2015. The facility consists of an underground mine, a surface gold mill, a tailings treatment facility, a man camp, road access and power distribution, and a water management system for water treatment and discharge.

The Alaska Pollutant Discharge Elimination System (APDES) permit authorizes the discharge of wastewater from two outfalls. Outfall 001 consists of water that drains from the underground mine and is discharged to Sherman Creek after treatment. Outfall 002 consists of water from the tailings treatment facility that is treated and discharged to East Fork Slate Creek. No mixing zone is authorized under this permit.

1.2 Opportunities for Public Participation

The Alaska Department of Environmental Conservation (DEC or the Department) re-issued an APDES wastewater discharge permit to Coeur. To ensure public, agency, and tribal notification and opportunities for participation during the permit development process, the Department completed the following:

- identified the permit on the annual Permit Issuance Plan posted online at: <http://www.dec.state.ak.us/water/wwdp/index.htm>
- notified potentially affected tribes that the Department would be working on this permit via letter, fax and/or email
- posted a preliminary draft of the permit on-line for a 10-day applicant review from January 31 through February 13, 2017 and notified tribes, local government(s), and other agencies
- formally published public notice of the draft permit on March 9, 2017 in the Juneau Empire and posted the public notice on the Department's public notice web page
- sent email notifications via the APDES Program List Serve when the preliminary draft and draft permit documents were available for review
- offered a five-day applicant review period on the Proposed Final permit documents; on April 19, 2017, consistent with regulation in 18 AAC 83, the applicant formally exercised the right to waive the five-day applicant review

The Department also requested comment from the Alaska Department of Natural Resources, Alaska Department of Fish and Game, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the Environmental Protection Agency.

The Department received comments from one interested party, EPA, on the draft permit and supporting documents.

This document summarizes the comments submitted and the justification for any action taken or not taken by DEC in response to the comments.

1.3 Final Permit

The final permit was issued by the Department on April 28, 2017. Significant changes are identified in the response to comments and reflected in the final permit and the fact sheet for the permit.

2 Minor Comments

The Department received several comments that were minor typographical/formatting comments or minor discrepancies between the permit and fact sheet that required correction. The Department did not include the minor comments nor response in this Response to Comments document, but as appropriate, did make revisions to the permit and fact sheet as determined necessary.

3 Comments on the Permit

3.1 Comment Summary

A comment included a request to have pH excursions reported electronically along with other Discharge Monitoring Report (DMR) required reporting instead of appending the pH excursions to the DMR. The comment also recommended citing the basis of pH excursions (40 CFR § 401.17) in the fact sheet for allowing such excursions.

Response:

Permit Sections 1.2.5.3 and 1.3.5.3 of the draft permit referring to pH excursion reporting have been removed. The DMR will be revised to include pH excursions as a part of regular reporting. The Fact Sheet Tables D-3 and D-4 have the citation for 40 CFR § 401.17 added as a footnote.

3.2 Comment Summary

A comment included a recommendation that end-of pipe limits be established and imposed in this permit for whenever the break-point chlorination system is approved to operate at Outfall 002.

Response:

The Permit was revised to apply limits for chlorine upon approval of the break-point chlorination system.

3.3 Comment Summary

A comment was made about Permit Section 2.4 regarding the appropriateness of introducing a compliance schedule for Outfall 001 and cited EPA's *Compliance Schedules for Water Quality—Based Effluent Limitations in NPDES Permits* (www.epa.gov/npdes/pubs/memocompliance_schedules_may07.pdf) as a supporting reference. The comment further suggested that the permit conditions to address concerns about residue may be more appropriately incorporated as a study element in the permit.

Response:

The permit incorporates a compliance schedule with milestones to determine the cause of and address the recurring residue forming in Sherman Creek as a result of the discharge at Outfall 001. As referenced in CWA sections 301(b)(1)(C) and 502(17) and 40 CFR § 122.2. 122.44(d)(1)(vii)(A), in order to grant a compliance schedule in an APDES permit, the permitting authority must make a reasonable finding, adequately supported by the administrative record, that the compliance schedule will lead to compliance with an effluent limitation to meet water quality standards by the end of the compliance.

The Department has documentation of several occurrences of residue formation in the receiving water attributed to the discharge at Outfall 001. Annual biomonitoring results of the receiving water indicated a measurable decline in benthic invertebrates downstream of the outfall that correlates to the period when residue was observed. Based on the Alaska Water Quality Standards criteria for residues for Growth and Propagation of Fish, Shellfish, Other Aquatic Life and Wildlife (18 AAC 70.020(b)(8)(C) (2003)) the residue appears to cause chronic problem levels (based on biomonitoring results) and forms a solid that is deposited on the creek bed, in violation of the residue water quality criteria. In response to these occurrences, the Department has required Coeur to determine the cause of the residue including an evaluation of the wastewater treatment system's influent and effluent and chemical analysis of the residue. The Department maintains that the compliance schedule will provide the information necessary to determine the proper course of action necessary to meet water quality standards at the completion of the compliance schedule. No changes were made to the permit documents based on the comment

4 Comments on the Fact Sheet Comment Summary

A request was made for clarification and consistency with federal regulations for the following fact sheet statement: *“The permittee has the option of taking more frequent samples than required under the permit. These additional samples can be used for averaging if they are conducted using Department-approved significantly sensitive test methods (generally found in 18 AAC 70 and 4040 CFR § 136 [adopted by reference in 18 AAC 83.010]), and if the Method Detection Limits (MDLs) are less than the effluent limits.”*

The comment indicated EPA's agreement with the corresponding permit language at Permit Section 3.3 and further cited Federal regulations 40 CFR 122.41(l)(4)(ii): *“If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.”*

Response:

Fact Sheet Section 4.4 was revised to be consistent with the language of the Permit.

4.2 Comment Summary

A comment was made concerning Fact Sheet Table C-4 requesting an explanation of why a breakpoint chlorination system is necessary at Outfall 002 if there is no reasonable potential (RP) for ammonia.

Response:

The comment is correct in that the analysis of ammonia did not demonstrate RP at the Outfall 002. However, ammonia, a byproduct of blasting, is believed to be a nutrient source for seasonal algal blooms

experienced in the Tailings Treatment Facility (TTF). Break-point chlorination was determined to be the most effective method of reducing ammonia in the influent for reducing or preventing future occurrence of algal blooms in the TTF. A break-point chlorination pilot study was conducted under Department review and approval to determine the efficacy of an ammonia reduction treatment and was demonstrated to be effective. Construction and operation of a full-scale break-point chlorination system requires Department review and approval. Chlorine monitoring at Outfall 002 is required under the permit to ensure that water quality standards are met.