

**Department of Environmental Conservation
Response to Comments**

For

**Niblack Project, LLC – BlackWolf Copper and Gold LTD
APDES Permit No. AK0053708**

Public Noticed February 11, 2022 – March 14, 2022

May 1, 2022



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

1 Introduction

1.1 Summary of Facility / Permit

The Niblack Project, LLC (Niblack) is an advanced stage exploration project located off Moira Sound on the southeast portion of Prince of Wales Island. Niblack is owned by BlackWolf Copper and Gold LTD (BlackWolf). The exploration targets are a series of volcanogenic massive sulfide deposits that contain copper, zinc, gold, and silver. Niblack consists of equipment and infrastructure, underground development for exploration, waste rock storage and disposal areas, and a wastewater treatment facility.

The Alaska Pollutant Discharge Elimination System (APDES) permit authorizes the discharge of treated wastewater into the Niblack Anchorage of Moira Sound. The APDES permit authorizes a mixing zone in Niblack Anchorage for copper, lead, mercury, nickel, and zinc.

1.2 Opportunities for Public Participation

The Alaska Department of Environmental Conservation (DEC or the Department) proposed to issue an APDES wastewater discharge permit to BlackWolf. To ensure public, agency, and tribal notification and opportunities for participation, the Department:

- identified the permit via online posting on the DEC Wastewater Permit Issuance Plan website at: [Permit Issuance Plan \(alaska.gov\)](https://www.alaska.gov/dec/permit-issuance-plan).
- notified potentially affected tribes and local governments and other agencies that the Department would be working on this permit via letter, fax and/or email
- posted a preliminary draft of the permit online for a 10-day applicant review and notified tribes, local governments, and other agencies
- published a public notice in the Ketchikan Daily News on February 14, 2022.
- posted a public notice of the draft permit on the Department's public notice webpage and notified tribes, local governments, and other agencies
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft, and proposed final permits were available for review

The Department received comments from one party, Southeast Alaska Conservation Council (SEACC), on the draft permit.

This document summarizes the comments submitted and the justification for any action taken or not taken by DEC in response to the comments. Substantive comments concerning requirements of the draft permit and DEC's responses are contained in the following pages. DEC did not respond to comments outside the scope or beyond regulatory authority of the permit. There were no changes made to the draft permit resulting from comments received during the public notice period that are reflected in the final permit.

1.3 Final Permit

The final permit was adopted by the Department on May 1, 2022. There were changes from the public noticed permit. Significant issues are identified in the response to comments and have been accounted for in the final fact sheet for the permit.

2 Comments on Effluent Limits and Monitoring Requirements

2.1 Comment Summary

SEACC disputes DEC's claim that allowing lower water quality is necessary to accommodate important economic benefit to Prince of Wales Island as cited in 18 Alaska Administrative Code (AAC) 70.015 (a)(2)(A) and is based on their contention that the stated number of potential jobs have not materialized. SEACC also contends that DEC erroneously concludes that other means of source control and treatment measures would be a financial hardship.

Response:

As stated in the draft fact sheet, BlackWolf and preceding companies have invested approximately \$37 million since 2009 toward exploration of the mineral prospect. Mineral exploration is an essential step toward the development of a productive mine and the potential socio-economic potential of the project was evaluated as a part of the antidegradation analysis specified in 18 AAC 70.015(a)(2)(A). Regarding potential jobs, there are no time-restrictions placed on a mineral exploration project.

The evaluation of the source control and treatment required of the discharge considers the source water quality and treatment options for the project. The water source is from groundwater that drains from the existing adit and the treatment method of using settling ponds is an appropriate method of treatment to remove particulates that are transported from the adit and the effluent quality generally reflects local groundwater quality of the area.

No change to the permit is warranted based on this comment.

2.2 Comment Summary

SEACC states that in regard to 18 AAC 70.015 (a)(2)(B), DEC statements from the 2022 draft fact sheet and Waste Management Permit 2006-DB0037 seem contradictory.

Response:

Waste Management Permit 2006-DB0037 (issued June 29, 2007) is expired and was superseded by Waste Management Permit 2013DB0001 on March 13, 2013. Additionally, a Waste Management Permit governs the containment of solid and liquid wastes while the APDES permit governs the discharge of wastewater to surface water. Since one permit is for containment and the other is for discharge, the fundamental differences offer few if any points of comparison while offering many contrasts. Given that concerns arise from contrasts between an obsolete solid and liquid waste containment permit and a permit for discharging wastewater to surface water, DEC finds them immaterial and beyond the scope of the permit.

Regulation 18 AAC 70.015 (a)(2)(B)(d) states that site-specific criterion will be set by the Department if the it finds evidence that reasonably demonstrates (1) the species or habitats present, or expected to be present under natural conditions, are more sensitive or less sensitive to a substance than indicated by the criterion, and a site criterion is required to prevent adverse effects or to alleviate an unnecessarily restrictive criterion, or (2) the natural characteristics of the receiving environment would increase or reduce the biological availability or the toxicity of a substance, or otherwise alter the substance, and a site specific criterion is required to prevent adverse effects or to alleviate unnecessarily restrictive general criterion. To date, the Department finds no reasonable evidence that conditions cited in (1) or (2) that would warrant a modification in criteria, exists.

No change to the permit is warranted based on this comment.

2.3 Comment Summary

SEACC states in regard to 18 AAC 70.015(a)(2)(C), DEC has not provided a convincing argument that the water quality of the discharge will be adequate to be protective of the waters of Niblack Anchorage.

Response:

The mixing zone, as authorized in accordance with 18 AAC 70.245, has been appropriately sized to fully protect the existing uses of Niblack Anchorage in that the diffuser length has been increased to 26.01 m to accommodate a 53 m length and 57 m width acute mixing zone and total length of 165 m and a total width of 110 m While the mixing zone size has increased in size to account for increased concentrations of copper and to a lesser extent, zinc, the mixing zone is still small in comparison to the size of Niblack Anchorage. More importantly, limits contained in the permit for copper and zinc parameters are Technology-Based Effluent Limitations (TBELs) (e.g., copper TBEL – 300 µg/L) that will be enforced at the end of pipe (prior to the diffuser) and are much lower than calculated concentrations allowed (e.g. copper Average Monthly Limit – 1,020 µg/L) that are derived by calculated effluent limits and available dilution in the receiving water which are used to model the dimensions of the mixing zone. As a result, the dilution required to bring concentrations for copper, the driving parameter for the mixing zone, to below the water quality criteria is much less (~ 5 meters from diffuser) than what is derived by the effluent limit calculation.

No change to the permit is warranted based on this comment.

2.4 Comment Summary

SEACC disputes DEC's statement in relation to 18 AAC 70.015(a)(2)(D) that the Department finds the most effective and reasonable methods of prevention, control, and treatment are practices and requirements set out in the permit. SEACC also contends that current treatment is inadequate due to the absence of total suspended solids (TSS), and that most metals measured are in dissolved form.

Response:

The comment conflates two different issues stated in the draft fact sheet. While there is indeed increased exploration activity, the status of the mine is inactive in the operational sense of not actively mining ore and is still minimally staffed. In reply to comment 2.2, the department finds the methods for pollution prevention, control, and treatment to be the most effective and reasonable in satisfying the requirements of 18 AAC 70.015(a)(2)(D).

In regard to the statement that the existing treatment by way of settling ponds is ineffective due to lack total suspended solids (TSS) and that most of the metals measured are in dissolved form is also in error as the historic data sheet 2006 -2014 from both the potentially acid generating material (PAG) ponds and final effluent clearly show. Values from the more recent 2016-2021 sampling period, though devoid of TSS values, also show significantly greater ratio of total metals to dissolved metals in the final effluent.

No change to the permit is warranted based on this comment.

2.5 Comment Summary

SEACC contends, as in comment 2.2, that DEC statements from the 2022 draft fact sheet and Waste Management Permit 2006-DB0037 seem contradictory and asks clarification on the new diffuser requirements.

Response:

Please refer to responses to comments 2.2 and 2.3 above.

No change to the permit is warranted based on this comment.

2.6 Comment Summary

SEACC appears to ask a question regarding on why best professional judgements for active mines TBELs are carried over from the 2015 and New Source Performance Standards (NSPS or new source effluent limit guidelines (ELGs)) are not applicable for the 2022 permit.

Response:

As stated in the 2022 draft fact sheet, Part 3.1.1, New source ELGs are applicable for active mines where construction commenced after the ELGs were established on December 3, 1982. Niblack was as inactive exploration project during the current 2015 permit term, and New Source ELGs were not applicable.” At the exploration stage of this project, construction of the facility has still not commenced. Therefore, NSPS are not applicable. However, out of an abundance of caution, best professional judgement implemented ELGs from the 2015 permit to address treated effluent resulting from pag pile, stormwater and, adit runoff in the 2022 permit.

No change to the permit is warranted based on this comment.

2.7 Comment Summary

SEACC made a comment on the PAG pile, cover, and chemistry.

Response:

The comment is appreciated but concerns voiced are beyond the scope of the permit.

2.8 Comment Summary

SEACC made a comment on water quality monitoring, exceedances, and corrective action.

Response:

The comment is appreciated but concerns are beyond the scope of the permit. No change to the permit is warranted based on this comment.

2.9 Comment Summary

SEACC made a series of comments on the Cornell Mixing Zone Expert System (CORMIX) model used in the design of the new mixing zone.

Response:

- In regard to the comment that the effluent has not been treated in the settling ponds, DEC refers to the reply for item 2.4 above.
- In regard to the comment that there has been no physical float through time test confirming absence of lethality to an organism and that the float through time based on the CORMIX model is four times what is recommended by the Environmental Protection Agency (EPA). DEC replies that physical drift time tests are not mandated by regulation and are addressed through guidance contained in EPA's Technical Support Document and is consistent with Section 4.3.3.
- In regard to the question asking for an explanation for the 10th percentile value being replaced by the higher value for the 35th percentile in the CORMIX model being due to the limitations of the CORMIX model. DEC replies that the CORMIX model estimates dilution requirements on very conservative assumptions about the effluent flow, ambient velocities, and pollutant concentrations. On occasion, it is necessary to adjust the ambient velocities to obtain a valid run from the program. This is not an uncommon practice in modeling and is based on best professional judgement. In addition, as explained in item 2.3 the actual concentration of copper requiring dilution will be much less than estimated by the effluent limit calculation (which requires the input of water quality criteria (WQC) based maximum expected concentration (MEC) – 2193.45 µg/L) due to the end of pipe limits (300 µg/L). This results in dilution to below WQC in much less distance from the diffuser than indicated by the CORMIX model.
- Issues of retrainment are addressed by copious amounts of calculations within the CORMIX model and were not flagged to be a concern based on model output results.
- In regard to the concern of the use of surrogate densities, DEC replies that waters from both locations are contiguous and therefore very similar, and that the use of surrogate data is fairly common when no data current exists. DEC acknowledges freshwater input into Niblack Anchorage may be greater than that of Kasaan Bay, but that stratification in all likelihood occurs given the greater depth of discharge. Densities at the greater depth will therefore be more akin to the data used as surrogate input giving more confidence in the use of said data. Stratification is integrated into the calculations of the CORMIX model and is therefore of little, if any consequence to the veracity of the CORMIX run. In addition, as explained in reply to comment 2.3, the actual concentration of copper, the driving parameter in sizing the new mixing zone, means that much less dilution is needed to reduce concentration to below the WQC.
- In regard to the concern about background concentration, DEC replies that the latest available values were used for input into the CORMIX program because there is not a discharge to the water's edge from the facility at this time that may elevate background concentrations. DEC does note that background concentrations outside the mixing zone will be recorded during the term of the upcoming permit.

No change to the permit is warranted based on this series of comments.

2.10 Comment Summary

SEACC comments that BlackWolf has declined to provide the Department of Natural Resources with an approved Oil and Hazardous Substance Prevention and Contingency Plan.

Response:

The comment is appreciated but concerns are beyond the scope of the permit. No change to the permit is warranted based on this series of comments.

2.11 Comment Summary

SEACC comments that environmental values and ecosystem services subject to impacts in the project area are important to define, and requests that the State act in the best interest of subsistence, sport fish and recreation users and implement the highest degree of environmental protection in the area.

Response:

In preparing the draft permit, DEC consulted with Alaska Department of Fish and Game over concerns of the re-sizing of the mixing zone. As a result, and as an extra precaution, DEC added additional monitoring requirements in addition to routine monitoring to ensure no adverse environmental impact is occurring outside the mixing zone. The additional monitoring includes ambient water, sediment, and tissue sampling of endemic organisms in the benthic zone.

No change to the permit is warranted based on the comment.