BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

IN THE MATTER OF: TECK ALASKA, INCORPORATED NPDES Permit AK-003865-3	Case No.

PETITION FOR REVIEW

BY

NATIVE VILLAGE OF KIVALINA IRA COUNCIL
NATIVE VILLAGE OF POINT HOPE IRA COUNCIL
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I. NATURE OF THE CASE AND FACTS RELEVANT TO THE ISSUES PRESENTED FOR REVIEW

On January 8, 2010, the United States Environmental Protection Agency (the "EPA"), through its Region 10 office, reissued a five-year National Pollutant Discharge Elimination System ("NPDES") permit under section 402 of the Federal Clean Water Act ("CWA"), 33 U.S.C. § 1342, Permit No. AK-003865-2 ("2010 Permit"), to Teck Alaska, Incorporated ("Teck" or "Permittee") for Teck's continued wastewater discharges in operating the Red Dog Mine and expansion into the Aqqaluk Deposit. EPA Region 10 provided notice of the Permit on January 15, 2010, and the Permit becomes effective on March 1, 2010. Because of various legal flaws in the Permit, the Native Village of Point Hope IRA Council, Native Village of Kivalina IRA Council, Alaska Community Action on Toxics, Northern Alaska Environmental Center, and Kivalina Residents Enoch Adams, Jr., Leroy Adams, Andrew Koenig, Jerry Norton, and Joseph Swan, Sr. ("Petitioners") submit this Petition for Review, pursuant to 40 CFR § 124.19, to the Environmental Appeals Board (the "Board" or "EAB").

A. NPDES Permit Overview

The previous NPDES permit was issued to Teck by the EPA on July 27, 1998.[1] The EPA proposed to modify the 1998 Permit in 2003, but the new conditions were appealed to EPA and the changed conditions did not go into effect.[2] Teck timely reapplied for the NPDES permit and the permit was administratively extended.[3] EPA reissued the NPDES permit in March 2007.[4]

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[1] Hereafter "1998 Permit," attached as Exhibit 1.

[2] *See* EPA Fact Sheet, dated Dec. 5, 2008 ("Fact Sheet"), at 6, attached as Exhibit 2; *In re Teck Cominco*, 11 E.A.D. 457 (EAB 2004) ("*Teck I*").

[3] *See* Ex. 2, Fact Sheet at 6.

[4] *See id.*

The reissued permit was again appealed and EPA withdrew the permit on September 27, 2007, citing the need to conduct additional National Environmental Policy Act ("NEPA") analysis.[5]

1. Relevant 1998 NPDES Permit Provisions

The end-of-the-pipe effluent limits for Outfall 001 (Middle Fork Red Dog Creek) in the 1998 Permit germane to this appeal are as follows: (1) Lead – 19.6 µg/L daily maximum (MDEL) and 8.1 µg/L monthly average (AMEL); (2) Total Dissolved Solids (TDS) – 196 mg/L MDEL and 170 mg/L AMEL; (3) Zinc – 257.3 µg/L MDEL and 119.6 µg/L AMEL; (4) Cyanide (total) – 9.0 µg/L MDEL and 4.0 µg/L AMEL; and (5) pH in a range of 6.0-10.5 standard units. For each of these limits, the permit required weekly sampling by Teck.[6]

In addition, the permit specifically prohibited the discharge of "any water not specifically authorized in this permit."[7] The permit directed Teck to collect samples at seven ambient monitoring stations: Station 140, Middle Fork Red Dog Creek upstream of Outfall 001; Station 20, Middle Fork Red Dog Creek upstream of confluence with North Fork Red Dog Creek; Station 12, North Fork Red Dog Creek; Station 10, Mouth of Red Dog Creek; Station 9, Ikalukrok Creek upstream of confluence with Red Dog Creek; Station 73, Ikalukrok Creek downstream of confluence with Red Dog Creek; and Station 2, Wulik River.[8] The permit required Teck to conduct sampling at any time there is flowing water.[9]

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[5] *See* Ex. 2, Fact Sheet at 6; *In re Teck Cominco*, 2007 WL 3138038 (EAB, Oct. 10, 2007) ("*Teck II*").

[6] *See* Ex. 1 at 4.

[7] Ex. 1 at 10, Condition I.C.15.

[8] *See* Ex. 1 at 11, Condition I.D.1.

[9] *See id.*, Condition I.D.2.

2. *Relevant 2010 NPDES Permit Provisions*

When the EPA issued the 2010 NPDES Permit, it relaxed several of the effluent limits, namely zinc (269.2 µg/L MDEL and 155.9 µg/L AMEL), and lead (8.5 µg/L) at Outfall 001.[10] The permit also eliminated monitoring for hardness at Outfall 001 and now allows Teck to "calculate" hardness since the monitoring for cations and anions apparently makes this possible.[11] The permit deletes monitoring for silver at Outfall 001 based on calculations using monitoring data from "the current permit cycle" that showed no reasonable potential to cause or contribute to the exceedance of water quality criteria.[12]

EPA also discontinued monitoring for total cyanide and replaced that monitoring with monitoring for weak acid dissociable ("WAD") cyanide, which reports all forms of cyanide except cyanide bound to iron.[13] The cyanide effluent limit was also changed to WAD cyanide, and established at 22.2. µg/L MDEL and 10.3 µg/L AMEL at Outfall 001. The Permit, however, also authorizes a 1,930-foot mixing zone for cyanide that begins 7,000 feet downstream from Outfall 001 despite the mixing that occurs in the first 7,000 feet after discharge.[14] Additionally, EPA eliminated ambient monitoring for cyanide entirely at stations 2, 10, 20, and 150.[15] EPA discarded all future data of upstream water quality by eliminating all ambient monitoring of

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[10] *See* Ex. 3, Permit at Table 1, Fact Sheet at 12-13.

[11] *Id.* at 13.

[12] *See* Ex. 2, Fact Sheet at 15; *compare* Ex. 3, Permit at Table 2 *with* Ex. 1, 1998 Permit at Section I.D.7. This finding by EPA stands in stark contrast to an EPA enforcement action in which EPA determined that Teck had intentionally diluted its effluent prior to discharge at Outfall 001 in direct violation of the 1998 permit between 2004 and 2006. *See infra* at Section I.B, page 7.

[13] *Compare* Ex. 3, Permit, Table 2 *with* Ex. 1, 1998 Permit at I.D.7.

[14] *See* Ex. 3 at 5 & 10, Permit at Table 1 & Section 1.C.1.

[15] *See id.*

tributary streams upstream of the mine.[16] EPA modified the permit to require the reporting of ambient monitoring to occur on an annual basis, rather than a monthly basis.[17]

Another significant change from the 1998 Permit was the EPA's inclusion of three mixing zones. Mixing zones were not included in the 1998 Permit.

The first mixing zone,[18] established for pH (Mixing Zone 1), runs from Outfall 001 to just before the confluence of the North Fork and Middle Fork of Red Dog Creek for a total of 7,000 feet.[19] The 2010 Permit provides that the range for pH at Outfall 001 shall be 6.5 to 10.5,[20] with a standard of 6.5 to 8.5 beyond the mixing zone.[21] The three other permit parameters with mixing zones that extend past the confluence of the North and Middle Forks of Red Dog Creek, ammonia, cyanide and total dissolved solids ("TDS"), do not include this distance in the mixing zones.

The second mixing zone, established for TDS, ammonia and cyanide (Mixing Zone 2), continues downstream from the North-Middle-Fork confluence for 1,930 feet to Station 151 (which is actually almost two miles from the point of discharge).[22] There is approximately 7,400 feet of the Main Stem of Red Dog Creek from the downstream edge of Mixing Zone 2 to the next mixing zone, which begins at the confluence of Red Dog Creek and Ikalukrok Creek. TDS

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[16] *See id.*

[17] *See* AK-003865-2, Response to Comments, Teck Alaska, Incorporated, Red Dog Mine, U.S EPA Region 10, December 2009 ("EPA Response") at 12-13, attached as Exhibit 4.

[18] For a map of the three mixing zones, see Ex. 5, State 401 Certification at 13.

[19] *See* Ex. 3, Permit at Table 1 & Section I.C.1; State of Alaska Final 401 Certification, attached as Exhibit 5, at 4.

[20] *See* Ex. 3, 2010 Permit, Table 1 at 6.

[21] *See* Ex. 5, 401 Certification at 6.

[22] *See* Ex. 3, Permit at Section I.C.1; Ex. 5 at 4, 401 Cert. at 2.

limits will exceed WQS within Mixing Zone 2, with an effluent limit of 1,500 mg/L downstream from Station 151 to the confluence of Red Dog Creek and Ikalukrok Creek.[23]

The third and final mixing zone (Mixing Zone 3) begins at the confluence of Red Dog Creek and Ikalukrok Creek and proceeds downstream 3,420 feet to Station 150 (which is actually almost four miles from the point of discharge).[24] This is the second mixing zone for TDS, with an effluent limit of 1,000 mg/L at Station 150.[25] After July 25th of each year through the end of the discharge season, the limit at Station 160 shall not exceed 500 mg/L in order to protect spawning Dolly Varden.[26]

At the request of the Alaska Department of Environmental Conservation ("ADEC"), EPA excluded from the 2010 Permit bioassessment monitoring for (1) periphyton (as chlorophyll-a concentrations) aquatic invertebrates: taxonomic richness and abundance on Middle Fork Red Dog Creek; (2) fall aerial surveys of returning chum salmon on Ikalukrok Creek; (3) metals concentrations in Dolly Varden gill, liver, muscle, and kidney, and aerial survey of overwintering Dolly Varden on the Wulik River; (4) fish presence and use on Anxiety Ridge Creek; (5) fish presence and use on Evaingiknuk Creek; and (6) fish presence and use on Buddy Creek from the 2010 Permit, and apparently ADEC will include these requirements in a state solid waste permit.[27] EPA retained the bioassessment monitoring for the North Fork Red Dog Creek, Main Stem Red Dog Creek, and Ikalukrok Creek.[28]

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[23] *See id.*

[24] *See* Ex. 3, Permit at Section I.C.1; Ex. 5 at 4, 401 Cert. at 2.

[25] *See id.*

[26] *See* Ex. 5, 401 Certification at 11.

[27] *Compare* Table 3A *with* Table 3B, Ex. 2, Fact Sheet at 14. By removing these requirements from the NPDES permit, they are no longer enforceable by EPA or in a citizen suit under 33 U.S.C. § 1365.

[28] Ex. 4, EPA Response at 18; Ex. 3, Permit at Table 3.

Despite a three-year history of Teck violating 1998 Permit condition I.A.1 by diluting its effluent at Outfall 001, EPA did not require monitoring for additional pollutants not subject to effluent limitations in the Permit or require Teck to hire an independent, third-party to do the monitoring.[29]

B. History of Violations at Red Dog

The Red Dog Mine has a long history of violating its NPDES permit. In the 1990s, the United States prosecuted Teck for violations of the Clean Water Act.[30] In 2002, Kivalina residents filed a citizen suit when EPA failed to enforce Teck's permit violations occurring after the 1997 Consent Decree. After several years of litigation, the U.S. District Court for the District of Alaska granted summary judgment to the plaintiffs on 621 violations, establishing liability against Teck Cominco for illegal discharges of total dissolved solids (618 violations) and total suspended solids (1 violation), and two illegal discharges to the tundra.[31]

Before the U.S. District Court granted summary judgment in 2006, EPA had issued four Compliance Orders by Consent ("COBCs") because Teck could not meet the daily or monthly TDS effluent limitations established in the 1998 Permit.[32] The COBCs collectively state that Teck violated both the daily maximum and monthly average TDS effluent limitations contained in the 1998 NPDES permit during the months of September 1998, May through October of 1999, May through October of 2000, and May through October of 2001.[33]

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[29] *See* Ex. 4, EPA Response at 31-32.

[30] *See* Consent Decree, *United States v. Cominco Alaska, Inc.*, attached as Exhibit 6 (assessing a $1.7 million civil penalty in 1997).

[31] *See Adams v. Teck Cominco Alaska, Inc.*, 2008 Summary Judgment Order, attached as Exhibit 8, at 30-31.

[32] *See* Ex. 8 at 3.

[33] *See id.*

On May 6, 2008, the District Court entered a judgment of liability against Teck Cominco for 161 further TDS violations, 34 illegal discharges of cyanide in excess of permit limits, and 11 whole effluent toxicity (WET) violations.[34] Thus, before the case was settled, the court in *Adams v. Teck Cominco* found that Teck Cominco had 824 violations of its federal Clean Water Act permits, including 776 daily TDS violations, 34 daily cyanide violations, 11 daily whole effluent toxicity violations at the Red Dog Mine, and two violations for unpermitted discharges to the tundra and one total suspended solids violation at the Port Site. The trial would have resolved hundreds of additional alleged violations.

Teck has also been penalized for illegal dilution of its effluent. In 2009, EPA assessed an administrative penalty against Teck Alaska for a total of 179 violations occurring between August 2004 and September 2006.[35] One hundred eleven of these violations involve the *deliberate* dilution of the mine site's effluent with fresh water from Bons Creek and sampling of that diluted effluent at Outfall 001. The 1998 Permit expressly required that effluent "samples collected shall be representative of the effluent discharged without dilution from or contact with any outside sources."[36]

C. Facts Related to Fish Toxicity

A study by Ott and Morris (2005) of waters impacted by Teck's effluent discharge demonstrated that levels of copper in fish livers were consistently higher than baseline levels.[37]

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[34] *See* 2008 Order, attached as Exhibit 7. (NOTE: The end of the order incorrectly states May 6, 2006; the "Filed" stamp in the header of the order indicates it was filed May 6, 2008.).

[35] *See* Consent Agreement and Final Order, attached as Exhibit 9.

[36] Ex. 1, 1998 Permit, Part I.A.1.

[37] *See* ADNR-OHMP (Office of Habitat Management and Permitting), 2005, Aquatic Biomonitoring at Red Dog Mine, 2004, National Pollution Discharge Elimination System Permit No. AK-003865-2, Technical Report No. 05-03, Prepared by Alvin G. Ott and William A. Morris, May 2005 (attached as Exhibit 10) at 65. This study was cited as a reference by the EPA in the Final Supplemental Environmental Impact Statement ("SEIS") at 5-2.

Ott and Morris also found in Ikalukrok Creek that periphyton (plants and macroinvertebrates that are indicators of the health of a stream) has decreased, that maximum concentrations of iron, aluminum, and lead were higher than pre-mining baseline conditions, and that maximum concentrations of cadmium and median concentrations of cadmium increased in 2004.[38]

Another study by Brix and Grosell (2005) determined that TDS made up half of the toxicity in the Teck Cominco effluent, and that the source of the other half of the toxicity was not yet determined.[39] In the same year as the Brix study, Teck represented in its own Discharge Monitoring Reports that TDS makes up *all* of the effluent toxicity.[40]

An Aquatic Biomonitoring study conducted in 2001 stated that the waters at station 10 rapidly return to background concentrations for TDS, about 150 mg/L, during periods of no mine discharge.[41] Thus the new permit's TDS standard is *ten (an order of magnitude) times background.* EPA admits that TDS toxicity has increased over pre-mining conditions.[42]

D. Relevant Facts Related to Arctic Grayling

According to the EPA, Arctic grayling use the North Fork Red Dog Creek, the Main Stem Red Dog Creek, and Ikalukrok Creek upstream of Red Dog Creek as spawning habitat.[43] Spawning occurs in the late spring, grayling fry hatch in late June and rear in North Fork Red Dog Creek and Main Stem Red Dog Creek until fall, feeding on benthic invertebrates and insects

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[38] *See* Ex. 10 at 25-26, 28, 31, and 34.

[39] Brix, Kevin V. & Grosell, Martin, PhD., *Report on the Effects of Total Dissolved Solids on Arctic Grayling and Dolly Varden Fertilization Success*, August 2005 (attached as Exhibit 11), at 13. This study was cited by the EPA as a reference at Final SEIS 5-5.

[40] *See* June 2005 DMR (attached as Exhibit 12) at 3 (noting that "all of the effluent toxicity can be attributed to TDS").

[41] *See* Scannell, Phyllis Weber & Ott, Alvin G., Aquatic Biomonitoring at Red Dog Mine, 2001, National Pollution Discharge Elimination System Permit No. AK-003865-2, Alaska Department of Fish & Game Technical Report No. 02-04, May 2002, at 39 (attached as Exhibit 13). This study was cited by the EPA as a reference at Final SEIS 5-20.

[42] *See* Ex. 4, EPA Response at 55, 57.

[43] *See* FSEIS at Table 3.10-2.

until August or September, when they migrate downstream to overwinter in Ikalukrok Creek and the Wulik River.[44]

Grayling are the only fish species to spawn in Red Dog Creek, so EPA previously set a 500 mg/L in-stream TDS limit to protect spawning grayling.[45] As noted previously, this permit was appealed to the EAB, and remanded to the EPA to consider whether this TDS limit would adequately protect Arctic grayling spawning.[46] Citing Brix and Grosell (2005), the EPA has noted that the maximum TDS concentration that would not adversely impact grayling is 1,357 mg/L.[47] Brix and Grosell (2005) did not find that concentrations above 1,357 mg/L (such as 1,500 mg/L) would not impact Arctic grayling during all life history phases, including the fertilization to egg hardening phase. That study determined that the no observable effects concentration was as low as 132 mg/L, and the lowest observable effect concentration was as low as 254 mg/L. EPA concedes in the Final SEIS that the Brix and Grosell study does not establish that the Permit's TDS mixing zones do not adversely affect spawning grayling:

> As discussed above, the bioassay tests are not fully conclusive that the TDS limit of 1,500 mg/L below the mixing zone in Main Stem Red Dog Creek is fully protective of arctic grayling spawning; however, the evidence is strong that the limit will be protective.[48]

Other evidence in the record demonstrates harm to arctic grayling at levels below the 1,357 mg/L concentration evaluated by Brix and Grosell and used by EPA in the Final SEIS. For example,

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[44] *See* FSEIS at 3-145.
[45] *See id.* at 3-153.
[46] *See Teck I*, 11 E.A.D. at 491.
[47] *See* FSEIS at 3-152.
[48] Final SEIS at 3-156.

studies demonstrate reduced fertilization rates in salmon at TDS concentrations as low as 250 ppm.[49]

An Alaska Department of Fish & Game literature review documents harm to aquatic life when TDS levels are at the levels in the new mixing zones.[50] The information presented in the Fish & Game TDS study demonstrates that waters containing TDS concentrations much lower than 1500 mg/L can be toxic to fish and other aquatic organisms, many of which are food sources for fish (periphyton).

EPA modified the 1998 Permit in 2003 to allow for a higher TDS effluent limit and instream limit.[51] Aquatic biomonitoring results showed that in the years 2000-2004, the year 2004 had the lowest density of invertebrates in Ikalukrok Creek above Dudd Creek, in Ikalukrok Creek at Station 7, and in the Main Stem Red Dog Creek at Station 10.[52] Further, Ott and Morris reported that in 2004, no larval Arctic grayling were found in Ikalukrok Creek above Dudd Creek, in Ikalukrok Creek at Station 7, and in Main Stem Red Dog Creek at Station 10.[53]

II. ARGUMENT ON THE ISSUES PRESENTED

A. Introduction

Any permit issued by EPA to the Permittee must provide for compliance with the applicable requirements of the Clean Water Act ("CWA" or "the Act") and its implementing

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[49] *See* Stekoll, Michael, S. William W. Smoker, Ivan A. Wang, & Barbi J. Failor, S*almon as a Bioassay Model of Effects of Total Dissolved Solids*, University of Alaska Fairbanks, Juneau Center School of Fisheries and Ocean Sciences, Final Report for ASTF Grant #98-1-012. JCSFOS 2003-002, 3 February 2003 (attached as Exhibit 14). This study was cited by the EPA as a reference in the Final SEIS at 5-22.

[50] Scannell and Jacobs, Alaska Department of Fish & Game, Effects of Total Dissolved Solids on Aquatic Organisms, Technical Report No. 01-06, June 2001 at 6-16 (hereafter "Fish & Game TDS study") (attached as Exhibit 15). This study was cited by the EPA as a reference in the Final SEIS at 5-20.

[51] *See Teck I*, 11 E.A.D. at 459-60.

[52] *See* Ex. 10 at 23, 31, 40 (figure 59).

[53] *See* Ex. 10 at 26, 34, 42.

regulations.[54] Any such permit must also ensure compliance with the applicable water quality requirements of all affected states.[55] Petitioners bring this appeal because there are certain conditions included in the Permit, and certain conditions omitted from the Permit, which are based on "a finding of fact or conclusion of law which is clearly erroneous" or reflect "an exercise of discretion or an important policy consideration which the [Board] should, in its discretion, review."[56]

B. Preliminary Standards Required for this Appeal

1. Standard of Review

A petition for review will be granted by the Board where it is demonstrated that the NPDES permit decision was based on a clearly erroneous finding of fact or conclusion of law, or if the decision involves an important matter of policy or exercise of discretion that warrants review.[57] The Board is the final decisionmaker for EPA, and therefore its review is not governed by traditional principles of judicial deference; rather its "determination is based on [an] independent review and analysis of the issue[s]." *In re Mobil Oil Corp.*[58] Although the Board may defer to a regional office on technical issues, it will do so only if the "approach ultimately selected by the Region is rational in light of all of the information in the record,"[59] and will not defer "[w]here the agency has failed to exercise its expertise." *Tex Tin Corp. v. EPA.*[60]

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[54] *See* 40 CFR §122.4(a).
[55] *See* 40 CFR § 122.4(d).
[56] 40 C.F.R. § 124.19(a).
[57] *See* 40 C.F.R. § 124.19(a).
[58] 5 E.A.D. 490, 508, 509 n.30 (EAB 1994).
[59] *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 568 (EAB 1998).
[60] 935 F.2d 1321, 1324 (D.C. Cir. 1991).

2. Standing

The rules governing this Petition limit who may appeal a final permit. Under 40 C.F.R. § 124.19(a), "[a]ny person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit." The Board has explained that this requirement is imposed to "ensure that the Region has an opportunity to address potential problems with the draft permit before the permit becomes final." *In re Envotech L.P.*[61]

Petitioners are concerned about the significant changes authorized by the 2010 Permit and the resulting impacts to water quality in the Kivalina vicinity and the Wulik River watershed. The continued protection and maintenance of water quality is of vital significance and importance to the health of present and future Alaskans, the quality of fish harvested from State and federal waters, and the maintenance of subsistence hunting and fishing grounds in northwest Alaska. Many Kivalina and Point Hope residents, including Petitioners here, are subsistence hunters and fishers. The Village of Kivalina is downstream of Teck's Red Dog Mine; the 2010 permit challenged here allows Teck to discharge more pollution into Red Dog Creek, which flows to Ilalukrok Creek, which flows to the Wulik River, which is the Village's drinking water source. The Native Village of Kivalina and the Native Village of Point Hope are federally-recognized tribes.

As reflected in Appendix H to the Final SEIS and the Record of Decision, each of the Petitioners participated in the public comment process. The written comments of Kivalina residents Enoch Adams, Jr., Leroy Adams, Andrew Koenig, Jerry Norton and Joseph Swan, Sr. can be found at Final SEIS H-13 through H-56 (Comment ID 7). The written comments of the

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[61] 6 E.A.D. 260, 266-67 (EAB 1996) (quoting *In re Beclqnan Prod. Serv.*, 5 E.A.D. 10, 16 (EAB 1994)).

Alaska Community Action on Toxics can be found at Final SEIS H-144 through H-147 (Comment ID 23). The written comments submitted by the Northern Alaska Environmental Center can be found at Final SEIS H-170 through H-182 (Comment ID 31). The written comments of the Native Village of Point Hope IRA Council can be found in the Final SEIS at H-196 through H-206 (Comment ID 42). Finally, the written comments of the Native Village of Kivalina IRA Council can be found in the Final SEIS at H-240 through H-251 (Comment ID 55).[62] For each of the relevant public comments discussed below, the Petitioners will cite to the Final SEIS, which is a part of the record of this proceeding.

3. Timeliness of Petition

Under the regulations governing permit appeals, a petition for review of a permit decision must be filed with the Board within 30 days of service of notice of the final permit decision by the permitting authority.[63] The 30-day period within which a person may request review begins with the service of notice unless the permitting authority specifies a later date.[64] Where, as here, a final permit decision is served by mail, a petitioner has three additional days in which to file a petition for review.[65] In addition, if the filing day falls on a weekend or legal holiday, a petitioner has until the next working day to file the petition.[66] Documents are considered filed on the date the Board receives them. *See in re Puna Geothermal Venture.*[67]

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[62] Each of the Petitioners have also appealed the ADEC's certification that the 2010 Permit will meet Alaska water quality standards.

[63] *See* 40 C.F.R. § 124.19(a) ("Within 30 days after a[n] ... NPDES ... final permit decision ... has been issued ... any person who filed comments on the draft permit or participated in the public hearing may petition the Environmental Appeals Board to review any condition of the permit decision.").

[64] *See id.*

[65] *See id.* at § 124.20(d).

[66] *See id.* at §124.20(c).

[67] 9 E.A.D. 243, 273 (EAB 2000) ("Documents such as petition for review are considered filed on the date they are received by the Board."); *see also Order Authorizing Electronic Filings*

The EPA Region 10 issued its required notice under 40 C.F.R. § 124.19(a) in a letter dated January 8, 2010.[68] In that letter, the EPA indicated that the notice date for purposes of the appeal deadline was January 15, 2010, which is a "later date" specified in the notice under 40 C.F.R. § 124.20.[69] Thirty days from that date is February 14, 2010 and a Sunday, and February 15 is a federal holiday. Thus, the deadline for this appeal to be filed with the EAB is February 16, 2010. This Petition is therefore timely filed.

C. The 2010 Permit Violates the Clean Water Act

The goal of the CWA is "to restore and maintain the chemical, physical and biological integrity of the nation's waters."[70] To achieve this goal, section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits any discharge of pollutants into waters of the United States, unless such discharge is authorized by a NPDES permit. *Waterkeepers of N. Cal. v. AG Indus. Mfg., Inc.*[71] In order to maintain water quality, once an NPDES permit is issued, the CWA prohibits "backsliding."[72] A new water quality standard can constitute backsliding when compared to the previous permit conditions.[73] The primary issues in the reissuance of the Permit are the illegal backsliding and degradation of water quality allowed.

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in Proceedings Before the Environmental Appeals Board Not Governed by 40 C.F.R. Part 22, dated January 28, 2010; 40 C.F.R. Part 124.

[68] *See* Ex. 16.

[69] *See id.*

[70] 33 U.S.C. § 1251(a).

[71] 375 F.3d 913, 915 (9th Cir. 2004) (citing *Ecological Rights Found. v. Pacific Lumber Co.*, 230 F.3d 1141, 1145 (9th Cir. 2000)).

[72] *See* 33 U.S.C. § 1342(o).

[73] *See In re City of Hollywood, Florida*, 5 E.A.D. 157, 177-78 (EAB 1994).

1. The EPA is Precluded From Relying on the State's Section 401 Certification Because Alaska Lacks the Legally Required Antidegradation Implementation Procedures to Perform a Legally Adequate Antidegradation Analysis.

Both the Native Village of Point Hope and the Native Village of Kivalina commented that the NPDES permit was defective because "ADEC cannot do an antidegradation analysis without ADP implementation plan."[74] The Villages noted that, since ADEC cannot legally perform this analysis, "the certification to allow for backsliding of the effluent limitations for cyanide, zinc and ammonia is illegal."[75] EPA responded:

> [T]he comment regarding the lack of implementation procedures goes to the adequacy of the underlying state water quality standards, of which antidegradation is a part. Alaska's water quality standards were approved by the EPA in a separate proceeding and are not subject to review or comment in this permit reissuance.[76]

Additionally, the EPA noted that the State properly considered the "five factors required" and that 18 AAC 70.015 tracked the substantive requirements of 40 C.F.R. §131.12.[77] Finally, the EPA asserted that 401 Certification demonstrates the State's compliance with the antidegradation policy.[78]

With these responses, the EPA did not acknowledge, as federal courts have, that there is a distinction between a state having an antidegradation policy ("ADP") and an antidegradation implementation procedure. *See, e.g., Ohio Valley Envt'l Coalition v. Horinko.*[79] The response fails to recognize that a state may not legally engage in an antidegradation analysis without

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[74] *See* Final SEIS at H-2-5 to H-206, H-251.
[75] Final SEIS at H-202 & H-248.
[76] Ex. 4, EPA Response at 21.
[77] *Id.* at 20-21,
[78] *See id.*
[79] 279 F.Supp.2d 732, 739 (S.D. W.V. 2003) (emphasizing that the legal questions raised in the case involved the antidegradation implementation procedures, not the antidegradation policy).

antidegradation implementation procedures, as discussed in detail below. Finally, EPA affirms that it knowingly issued a permit in reliance on Alaska's Certification when EPA has known *for thirteen years* that Alaska has violated and continues to violate the Act by failing to adopt an antidegradation implementation procedure. Under the Clean Water Act, the EPA cannot issue the Permit given the current legal deficiency in what is the heart of Alaska's water quality standards: the antidegradation policy and implementation procedures.

The EPA may not issue an NPDES permit until a state has granted its 401 Certification, unless the state waives certification.[80] Under the CWA, states adopt water quality standards, and as part of those standards, a state must "develop and adopt a statewide antidegradation policy and identify the methods for implementation of such policy ..."[81] The regulations further provide that "the antidegradation policy and implementation methods shall, at a minimum, be consistent with" certain federal standards specified in the regulation.[82] The policy must "be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation." *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology.*[83] States are required to submit their antidegradation policy and antidegradation implementation procedures to the EPA for approval.[84]

Federal courts recognize that the antidegradation policy and the antidegradation implementation procedures are not the same; they are separate and distinct requirements under the CWA.[85] "The antidegradation implementation procedures specify how the State will

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[80] *See* 40 C.F.R. § 124.53(a).
[81] 40 C.F.R. § 131.12(a).
[82] *See id.*
[83] 511 U.S. 700, 705-06 (1994).
[84] *See* 33 U.S.C. § 1313(c)(3).
[85] *See, e.g., Ohio Valley Envt'l Coalition*, 279 F.Supp.2d at 739.

determine on a case-by-case basis whether, and to what extent, water quality may be lowered."[86] The purpose of developing antidegradation implementation procedures is two-fold. First, such methods "encourage consistent application of the antidegradation policy and provide guidance to the EPA where, as in Alaska, EPA issues NPDES permits."[87] Second, it "deters States from adopting implementation methods which undercut or reinterpret the State's antidegradation policy so as to render it, in practice, inconsistent with the requirements of section 131.12(a)."[88]

The three tiers of federal antidegradation policy ("ADP") are outlined in 40 C.F.R. § 131.12(a)(1)-(3). Alaska has adopted these three tiers by regulation.[89] At issue with this appeal are the first two tiers. A "Tier 1" designation is meant to protect all existing uses of a waterbody: water quality may be lowered only if "existing instream uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."[90] "Tier 2" provides the protection necessary "to support propagation of fish, shellfish, and wildlife and recreation in and on the water" to waters whose quality already exceeds the Tier 1 level and allows for reduction in water quality only if, after a full public process and intergovernmental coordination, it is "necessary to accommodate important economic and social development."[91] "In allowing such

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[86] EPA *Water Quality Handbook* at Section 4.3.

[87] Letter from Philip G. Millam, Region 10 EPA to Michelle Brown, Commissioner, Alaska DEC, dated April 7, 1997, attached as Exhibit 17, at 4.

[88] Ex. 17 at 4. This parallels the EPA's *Water Quality Handbook*, which states, "EPA may disapprove and federally promulgate all or part of an implementation process for antidegradation if, in the judgment of the Administrator, the State's process (or certain provisions thereof) can be implemented in such a way as to circumvent the intent and purpose of the antidegradation policy." EPA *Water Quality Handbook* at Section 4.3.

[89] *See* 18 AAC 70.015.

[90] 40 C.F.R. § 131.12(a)(1).

[91] 40 C.F.R. § 131.12(a)(2).

degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully."[92]

Whenever any lowering of water quality occurs under Tier 2, the antidegradation regulation requires a state to: (1) determine whether the degradation is "necessary to accommodate important economic or social development in the area in which the waters are located"; (2) consider less degrading alternatives; (3) ensure that the best available pollution control measures are used to limit degradation; and (4) guarantee that, if water quality is lowered, existing uses will be fully protected.[93]

"An antidegradation implementation policy works to maintain the existing uses of waterways." *Northwest Envt'l Advocates v. EPA*.[94] A state's antidegradation policy cannot comply with the Act if it lacks implementation procedures. In *Northwest Envt'l Advocates*, the plaintiffs challenged the State of Oregon's ADP implementation procedure, which was codified and embodied in a single sentence: "The standards and policies set forth in OAR 340-041—120 through 340-041-0962 are intended to implement the Antidegradation Policy."[95] The court noted that it was a "bare bones" and "skeletal" policy,[96] ultimately holding it to be inadequate under the law. The court found that this simple statement "could not rationally be read as a 'policy' that specifically identifies the 'methods for implementing such policy.'"[97] The court noted that merely referring to the "entire body of water quality standards" was inadequate in identifying the required implementation methods.[98]

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[92] *Id.*
[93] *See* 40 C.F.R. § 131.12(a)(2); EPA *Water Quality Handbook* at 4-7.
[94] 268 F.Supp.2d 1255, 1262 (D. Or. 2003).
[95] *Id.*
[96] *Id.* at 1262-63
[97] *Id.* at 1265 (quoting 40 C.F.R. § 131.12(a)).
[98] *Id.*

Similarly here, EPA has determined that since 18 AAC 70.015 follows the substantive requirements of 40 C.F.R. § 131.12, the State has promulgated a sufficient antidegradation policy under which it is capable of performing an antidegradation analysis.[99] The mere existence of Alaska's regulatory scheme does not demonstrate the existence of the required implementation procedure. EPA is well aware, since it highlighted the deficiency in 1997 and told the State to correct it within the subsequent three years, that the legally required implementation procedures are not in effect,[100] making a legally adequate antidegradation analysis impossible.

Additionally, in *CORALations v. EPA*,[101] the plaintiffs challenged the water quality standards promulgated by Puerto Rico because they lacked ADP implementation procedures. In that case, Puerto Rico had submitted water quality standards that failed to include an antidegradation implementation procedure. The court held that the EPA had failed to "prepare and publish proposed regulations setting forth a revised or new water quality standard," as required by 33 U.S.C. § 1313(c)(4)(B), because Puerto Rico had clearly failed to include ADP implementation in its water quality standards.[102] The court went on to add that, since Puerto Rico never adopted ADP implementation procedures as required under the Clean Water Act, any approval by the EPA of Puerto Rico's WQS was "not valid."[103]

Neither the State nor the EPA dispute any of the public comments asserting that Alaska still has not promulgated ADP implementation procedures. Having implementation procedures

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[99] *See* Ex. 4, EPA Response at 20-21.

[100] *See generally* Ex. 17. This Board has previously held in the history of this Permittee that the EPA may not authorize a permit when the EPA has not approved of the applicable State WQS. In *Teck 1*, the EAB noted that the 500mg/L TDS criterion challenged had not been approved by the EPA; "it [had] been explicitly called into question by the Agency." *Teck 1*, 11 E.A.D. at 491.

[101] 477 F.Supp.2d 413 (D. Puerto Rico 2007).

[102] *Id.* at 418.

[103] *Id.*

is a "required element of" water quality standards.[104] In the absence of implementation procedures, the State of Alaska does not have fully-promulgated water quality standards, let alone the capability of performing a legally adequate antidegradation analysis to support backsliding under an EPA-issued NPDES permit. It is an abuse of discretion for the EPA to rely on the State's antidegradation analysis when it is EPA's duty to ensure that backsliding does not occur when reissuing an NPDES permit. The State not having legally adequate ADP implementation procedures, while purporting to perform a legal antidegradation analysis, is "precisely the type of compelling reason, or clear error, underlying a state certification that precludes the permit issuer from relying on the certification to establish that a permit's conditions will ensure compliance with the applicable EPA approved state water quality standards."[105] EAB's previous analysis in *Teck I* applies to several of the backsliding issues associated with the 2010 Permit, as noted further below.

2. EPA Authorized Illegal Backsliding in the Permit.

Despite the Clean Water Act's prohibition against the implementation of less stringent effluent limits when compared to a prior NPDES permit, the 2010 Permit allows for weaker limits for several pollutants, some of which explicitly violate water quality standards, resulting in significant consequences for fish habitat and the downstream communities.

The Petitioners raised several issues that indicate that the draft permit violated the CWA Section 402(o) prohibition against backsliding. The Petitioners noted that the permit reissuance violates Section 402(o) because several effluent limitations, particularly TDS (196 ppm on a

[104] *Northern Envt'l Advocates*, 268 F.Supp.2d at 1265.
[105] *Teck 1*, 11 E.A.D. at 491.

daily basis), have been relaxed or removed.[106] The EPA responded by referring to the State's antidegradation analysis:

> Under CWA § 303(d)(4)(B), which applies to attainment waters, water-quality based effluent limitations may be relaxed provided doing so is consistent with the State's antidegradation policy. ... [T]he CWA § 401 Certification includes an analysis based on the requirements of 18 AAC 70.015 and 40 CFR 131.12, which determined that changes to effluent limitations are consistent with the antidegradation policy and will not violate applicable state water quality standards.[107]

The Petitioners also noted that the new permit would weaken the effluent limits for zinc, selenium and cadmium at Outfall 001.[108] In response, the EPA observed that the State's 401 Certification proposes to rescind the site specific criteria for zinc and acknowledges that the "EPA has not acted on this submittal to change the WQS."[109] But, the EPA asserts, "It is the State's judgment that these changes will not affect the levels of zinc and selenium in the discharge and the revised limits are protective of the existing uses of the receiving water."[110]

The Clean Water Act's "anti-backsliding" requirements provide that a renewed or reissued permit must contain standards or conditions at least as stringent as the standards or conditions contained in the previous permit, unless the permit falls within certain statutory exceptions.[111] The applicable anti-backsliding exceptions are found in § 402(o)(2)[112] or in CWA

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[106] *See* Final SEIS at H-48.
[107] Ex. 4, EPA Response at 52.
[108] *See* Final SEIS at H-43.
[109] Ex. 4, EPA Response at 26.
[110] *Id.*
[111] *See* 33 U.S.C. § 1341(o)(2); 40 C.F.R. § 122.44(1).
[112] 33 U.S.C. § 1342 (o)(2) **Exceptions**. A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if —
(A) material and substantial alterations or addition to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;
(B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the

§ 303(d)(4)(B).[113] These two provisions are independent exceptions to the prohibition against relaxation of permit limits.[114]

Under the "new information" exception found in Section 402(o)(2)(B),

> Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.[115]

Section 303(d)(4)(B) allows establishment of less stringent water quality-based effluent limits in a permit for discharge into waters attaining water quality standards so long as the revised permit limit is consistent with a State's antidegradation policy, and continues to assure compliance with applicable water quality standards.

As noted in detail below, neither of the anti-backsliding exceptions upon which the EPA relies applies to the relaxed effluent limits in the Permit.

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application of a less stringent effluent limitation at the time of permit issuance; or (ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B).

(C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) the permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or

(E) the permittee has installed the treatment facilities required to meet the effluent limitations in the current permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the current effluent limitation, in which case the limitation in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

[113] 303(d)(4) **Limitations on revision of certain effluent limitations.**

(B) **Standard Attained**. For waters identified under paragraph (1)(A) where the quality of such water equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any other permitting standards may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

[114] *See* 58 Fed. Reg. 20802, 20837.

[115] 40 C.F.R. § 122.62(a)(2).

a. The EPA cannot rely on the State's antidegradation analysis to justify any exceptions to the prohibition against backsliding.

As noted previously, Petitioners stated during the public comment period that the NPDES permit allows impermissible backsliding because ADEC cannot do an antidegradation analysis without ADP implementation procedures.[116] In response, the EPA observed,

> The limitations are appropriately based on the more current data, which is most predictive of future discharges. The current data sets and the observed statistical variability constitutes new information that falls within the anti-backsliding exception set forth in CWA §402(o)(2)(B)(i).[117]

The EPA also noted that the Section 402(o) "new information" exception applies to effluent limitations for lead and selenium.[118] The Petitioners also expressed concerns that, while the scale of operations and volume of waste have expanded over time, the permits have progressively become weaker.[119] In response, the EPA observed,

> The Final Permit cannot be compared to permits issued in 1998 without also providing the proper context in which each permit was developed. During permit reissuance, the NPDES program can incorporate new data, methods, or standards that may result in permit conditions that differ from the previous permit, provided that any changes comply with all applicable WQS and policies.[120]

As noted previously, the EPA cannot reasonably rely on the State's antidegradation analysis. The EPA has been aware for thirteen years that the State lacks ADP implementation procedures.[121] And since implementation procedures are a legally "required element" of an ADP, the EPA cannot rely on an antidegradation analysis that the EPA knows is legally inadequate. It is EPA's duty to ensure compliance with CWA requirements before allowing

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[116] *See* Final SEIS at H-2-5 to H-206, H-251.
[117] Ex. 4, EPA Response at 46.
[118] *See id.*
[119] *See* Final SEIS at H-39.
[120] Ex. 4, EPA Response at 47.
[121] *See* Ex. 17, at 2 ("Alaska needs to identify implementation procedures for its antidegradation and mixing zone policies.").

backsliding. This fundamental procedural defect prevents EPA from relying on the Section 303(d)(4)B) exception to the prohibition against backsliding: Alaska's certification is thus facially invalid.

In addition, the EPA does not fully explain how the "new information" exception to anti-backsliding is applicable. While the discharge information under the 1998 permit is new, the "new information" exception could only arguably be used where the revised limitation results in a net reduction in pollutant loadings, which has not been established.[122] As such, backsliding must be alternatively justified by compliance with the State's antidegradation policy, which is also unavailing, as described above.

b. The less-stringent cyanide effluent limits are not justified.

Petitioners expressed concerns at various points in the public comment process about the new permit limits for cyanide. Petitioners noted that the new permit removed the end-of-pipe effluent limits for cyanide.[123] In another, Petitioners suggested that Teck should be required to employ a cyanide-kill process such as ferrous sulfate that could not only reduce cyanide, but inhibit the release of ammonia.[124] Petitioners also noted that since the State lacked antidegradation implementation procedures, the State's antidegradation analysis in the 401 Certification allowing backsliding of the cyanide effluent limits was illegal.[125] In response, the EPA commented:

> As documented in the CWA § 401 Certification, ADEC has determined that the proposed cyanide limits are protective of aquatic life in the receiving water.

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[122] *See Draft Interim Guidance on Implementation of Section 402(o) Anti-backsliding Rules for Water Quality-Based Permits* ("Anti-backsliding Guidance") (September 1989) at 7 n.10.

[123] *See* Final SEIS at H-37 to H-38.

[124] *See id.* at H-250, H-204.

[125] *See id.* at H-202, H-248.

> These limits can be met in the discharge at the outfall without additional treatment ... WAD cyanide limits at the discharge are included in the Final Permit.[126]

The EPA also noted that the antidegradation analysis properly considered the use classifications for Main Stem Red Dog Creek and Ikalukrok Creek, and that the State "properly considered the five factors required."[127]

Further review by the EAB is warranted because no permitting agency has conducted a legal anti-backsliding analysis. Because the Permit has different effluent limits for cyanide given a change in the State's water quality standard from measuring total cyanide to WAD cyanide, there is no way for the public to know whether the change in effluent limits constitutes backsliding. Neither the State nor the EPA explains the consequences of the change in measurement method with regard to whether the effluent limit is relaxed or stricter compared to the 1998 Permit. EPA merely states that "the monthly average and daily maximum limits of 10.3 ug/L and 22.2 ug/L were derived from the chronic aquatic life WQS and are well below the applicable drinking water standard of 200 ug/L."[128]

Thus, it appears that the Permit authorizes backsliding of cyanide effluent limits. It is of particularly concern because the record reflects that Mixing Zone 2 in Main Stem Red Dog Creek is both spawning habitat for Arctic grayling and of the pathway to grayling spawning habitat in the North Fork Red Dog Creek.[129] The EPA acknowledges that Arctic grayling spawn in the Main Stem of Red Dog Creek, a portion of which is within Mixing Zone 2, yet ignores this inconvenience.[130] Additionally, while the Maximum Projected Effluent Limit for WAD cyanide is 6.1, well below the effluent limits contained in the permit, EPA inexplicably escalated

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[126] Ex. 4, EPA Response at 23, 29.
[127] *Id.* at 20-21.
[128] Ex. 4, EPA Response at 52.
[129] *See* Final SEIS at 3-141, 3-145.
[130] *See id.* at 3-145.

allowable cyanide discharges.[131] The EPA has not "articulated with clarity the reason"[132] for its cyanide limit relaxation. Therefore, this apparent backsliding of cyanide limits is not justified.

c. The less-stringent zinc effluent limits are not justified.

During the public comment period, the Petitioners expressed concerns that the Permit would authorize weakened effluent standards for zinc at the point of discharge.[133] Specifically, the Petitioners noted that the zinc limitation at Outfall 001 would be weakened, allowing the limit to be relaxed from 210 to 269 µg / L.[134] In response, the EPA noted that the CWA 401 Certification proposes to rescind the natural condition-based site specific criterion for zinc, while acknowledging that the EPA has not acted on this submittal to change the WQS.[135] The EPA added, "It is the State's judgment that these changes will not affect the levels of zinc … in the discharge and the revised limits are protective of the existing uses of the receiving water."[136]

The "State's judgment" upon which the EPA relies is found in the DEC Draft 401 Certification, which states:

> The department reviewed [Teck's] request to rescind the NCBSSC for zinc applied to the Main Stem that was approved in the 401 certification issued for the 1998 NPDES Permit. At the time of that certification, the zinc NCBSSC was less stringent than the applicable zinc Alaska Water Quality Standards (WQS) at 18 AAC 70.020(b). Since the approval of the NCBSSC for zinc in the 1998 NPDES Permit certification, the WQS for zinc has become less stringent resulting in the NCBSSC being more stringent than the currently applicable WQS for zinc listed in 18 AAC 70.020(b)(11). The department finds that the NCBSSC for zinc in the Main Stem is not required to protect existing uses of the waterbody and removal of the zinc NCBSSC is hereby approved. The applicable WQS for zinc in the Main Stem shall be determined as required in 18 AAC 70.020(b) and the *Alaska*

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[131] *See* Ex. 2, Fact Sheet, Appendix C, Table C-3.

[132] *In re Carolina Power & Light Co.*, 1 E.A.D. 448, 451 (Act'g Adm'r 1978) (noting that the Region must "articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions.").

[133] *See* Final SEIS at H-43.

[134] *See id.*

[135] *See* Ex. 4, EPA Response at 26.

[136] *Id.*

> *Water Quality Criteria Manual*. These are the criteria upon which the effluent limits in the NPDES Permit are based.[137]

Later, the Draft 401 Certification states, "Similarly, the state-wide water quality criterion for zinc, which is the basis for the effluent limits in this permit, is protective of the aquatic life designated use."[138] EPA then notes, "[Teck] requested, in their application package, that EPA retain the SSC developed for zinc during the current permit issuance but in a letter to ADEC dated December 10, 2005, [Teck] requested that ADEC not re-certify the SSC for zinc. The SSC was 210."[139] Finally, when explaining the 2010 Permit limitations, the EPA notes:

> The State has not re-certified the site specific criterion (SSC) used for zinc in the current permit, which contained a zinc limit based on the natural condition SSC of 210 µg/L provided in the State's 1998 § 401 Certification of the permit. This means that the state-wide criteria of 269 µg/L … would be utilized to calculate the permit effluent limit. ADEC has determined that the use of these criteria would not violate their Antidegradation Policy. Also, EPA believes that the adoption by ADEC of the EPA Water Quality Criteria for Water [63 FR 68354-68364, December 10, 1998] for this parameter is protective of existing uses downstream of the outfall as required by 18 AAC 70.015(a)(1) Antidegradation Policy, so the permit may allow backsliding based on the 303(d)(4)(B) exception …[140]

As noted previously, the EPA cannot reasonably rely on the State's antidegradation analysis. The EPA has been aware for thirteen years that the State lacks ADP implementation procedures. And since an implementation procedure is a "required element" of an ADP, the EPA cannot rely on an antidegradation analysis that the EPA both has called into question and is facially not in compliance with the CWA.[141] This therefore precludes the EPA from relying on the Section 303(d)(4)B) exception to the prohibition against backsliding with regard to the relaxed zinc effluent limits.

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[137] Ex. 2, Fact Sheet, Appendix B, at 23.
[138] *Id.* at 35.
[139] Ex. 2, Fact Sheet, Appendix C, Table C-2.
[140] *Id.* at 48.
[141] *See Teck I*, 11 E.A.D. at 491.

In addition, the State may not certify the relaxed effluent limit as part of its antidegradation analysis because the EPA, by its own admission, has not "acted on" the State's submission of a change in WQS with regard to zinc. "States must submit all new and revised standards to EPA for review."[142] The relaxed zinc standard contained in the permit constitutes a change to the State's WQS that has not been approved by the EPA.[143] Therefore, the EPA has committed clear error in issuing a permit with effluent limits based on standards that have not been approved.

Most importantly, neither the State nor EPA has adequately explained how the relaxed zinc effluent standard will protect existing uses. In its draft 401 Certification, which appears in the Fact Sheet, ADEC noted, "Similarly, the state-wide water quality criterion for zinc, which is the basis for the effluent limits in this permit, is protective of the aquatic life designated use."[144] The EPA did not provide any more analysis, merely stating, "EPA believes that the adoption by ADEC of the EPA Water Quality Criteria for Water [63 FR 68354-68364, December 10, 1998] for this parameter is protective of existing uses downstream of the outfall."[145] Neither of these "analyses" supports allowing backsliding or rises to the level of explanation required for the

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[142] *Northwest Envt'l Advocates*, 268 F.Supp.2d at 1259.

[143] *See* Comparison of State and Federally Approved Water Quality Standards, ADEC, Feb. 2, 2010, attached as Exhibit 18.

[144] Ex. 2, Fact Sheet at 35. It is worth noting that for purposes of antidegradation analysis, the Clean Water Act focuses on "existing" uses, not "designated" uses. *See Teck I*, 11 E.A.D. at 465. "Designated uses focus on the attainable condition while existing uses focus on the past or present condition." *Id.* (quoting Water Quality Standards Regulation (Advance Notice of Proposed Rulemaking), 63 Fed. Reg. 36,742, 36,748 (July 7, 1998)). Thus, in purporting to conduct an antidegradation analysis, it is incorrect for the ADEC to focus, and the EPA to rely on, designated uses rather than existing uses when conducting a backsliding analysis under the ADP.

[145] Ex. 2, Fact Sheet at 48.

EAB to be able to conduct any meaningful review.[146] "Without an articulation by the permit writer of his [or her] analysis, [the EAB] cannot properly perform any review whatsoever of that analysis and, therefore, cannot conclude that it meets the requirement of rationality." *In re Gov't of D.C., Mun. Separate Storm Sewer Sys.*[147]

d. The less-stringent lead and selenium effluent limits are not justified.

Petitioners commented that the relaxed effluent limits in the Permit for lead and selenium constituted illegal backsliding.[148] The 2010 Permit's lead AMEL is less stringent, *i.e.*, 8.5 µg/L compared to 8.1 µg/L, while the selenium MDEL is less stringent, 7.2 µg/L compared to 5.6 µg/L.[149] According to the State's 401 Certification, this "minor [change was] the result of statistical variability in data sets used to determine effluent limits."[150] ADEC added that since "these changes will not affect the levels of these pollutants in the discharge … no antidegradation analysis is required."[151]

The EPA responded to Petitioners' comments that Section 402(o) includes an exception for new information that applies to the effluent limitations for lead.[152] Specifically, the EPA stated:

> Importantly, however, both WQS/wasteload allocations used in determining the effluent limitations are the same as those used in the 1998 permit with the limitations being slightly different because of the statistical variability within the

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[146] Another point worth noting is that a new standard does not constitute "new information" that would justify backsliding under section 402(o)(2). Since that is essentially the basis of the antidegradation analysis by both ADEC and EPA, it is antithetical to allow such an analysis when it is clearly not allowed in another anti-backsliding exception. *See Anti-backsliding Guidance* at 7.

[147] 10 E.A.D. 323, 342-43 (EAB 2002).

[148] *See* Final SEIS at H-251.

[149] *See* Ex. 5, 401 Cert. at 16.

[150] Ex. 5, 401 Cert. at 16.

[151] Ex. 2, Fact Sheet, Appendix B, at 33.

[152] *See* Ex. 4, EPA Response at 45.

> current data sets. The limitations appropriately are based on the more current data, which is most predictive of future discharges. The current data sets and the observed statistical variability constitutes new information that falls within the anti-backsliding exception set forth in CWA § 402(o)(2)(B)(i).[153]

EPA's backsliding justification is legally invalid. The "new information" exception can only be used where the revised limitation results in a net reduction in pollutant loadings, which has not been established.[154] As such, backsliding must be alternatively justified by compliance with the State's antidegradation policy, which is also unavailing because the State cannot provide a legally adequate antidegradation analysis.

Additionally, the EPA has not adequately explained in the record how the relaxed effluent limit for the lead AMEL will be protective of existing uses, and the EAB cannot conduct any meaningful review.[155]

e. The TDS mixing zones constitute illegal backsliding

In what is perhaps one of the more egregious provisions in the Permit, the ADEC has authorized, and EPA has approved, a mixing zone of a 1,930-foot stretch of Main Stem of Red Dog Creek, which is both Arctic grayling spawning habitat and the access to spawning habitat in North Fork Red Dog Creek. The authorized limitation at the downstream edge of this mixing zone is 1500 mg/L, meaning that for 1,930 feet upstream, spawning grayling and the attempted fertilization of eggs will endure concentrations that exceed 1,500 mg/L TDS. Downstream concentrations of TDS from Mixing Zone 2 will exceed 1,000 mg/L for two miles until the downstream edge of Mixing Zone 3 at Station 160 on Ikalukrok Creek. TDS will not be reduced to 1,000 mg/L until some two miles later, at the downstream edge of Mixing Zone 3. After July 25th of each year, the allowable TDS concentration at Station 160 is 500 mg/L to protect

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[153] Ex. 4, EPA Response at 46.
[154] *See* Anti-backsliding Guidance at 7 n.10.
[155] *See In re Gov't of D.C., Mun. Separate Storm Sewer Sys.*, 10 E.A.D. at 342-43.

spawning Dolly Varden. The impacts of these mixing zones on the health of fish populations gravely concerns Petitioners, as was reflected during the public comment process, because grayling are an important subsistence food for the Native Village of Kivalina. In *Teck I*, the EAB remanded the permit because EPA failed to justify how one day the EPA declined to approve the 500 mg/L TDS SSC criterion for the Main Stem of Red Dog Creek and then include that effluent level for TDS in the permit the next day, stating that evidence suggested such levels would be harmful to fish.[156] The impacts of TDS on the Arctic grayling population in Red Dog Creek has been studied and acknowledged.[157] EPA continues to ignore the facts, the law, and its stated commitment to ensure environmental justice to grant a permit to Teck at the expense of Petitioners' interest in a healthy subsistence fish resource.

Petitioners noted that the 2010 Permit violates Section 402(o) because the effluent limitations for TDS had been significantly relaxed and is not protective of grayling.[158] Petitioners also objected to the removal of the end-of-pipe effluent limits for TDS, noting particularly that they were not supported.[159] In response, the EPA noted:

> Under CWA § 303(d)(4)(B), which applies to attainment waters, water-quality based effluent limitations may be relaxed provided doing so is consistent with the State's antidegradation policy. ... [T]he CWA § 401 Certification includes an analysis based on the requirements of 18 AAC 70.015 and 40 CFR 131.12, which determined that changes to effluent limitations are consistent with the antidegradation policy and will not violate applicable state water quality standards.[160]

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[156] *See Teck I*, 11 E.A.D. at 491.

[157] *See* Scannell and Jacobs (2001), Scannell and Ott (2002), Ott and Morris (2004), and Brix and Grosell (2005).

[158] *See* Final SEIS at H-40, H-48.

[159] *See* Final SEIS at H-37 to H-38, H-41.

[160] Ex. 4, EPA Response at 52.

The EPA also noted that the "rationale for deleting TDS effluent limit is explained at Appendix C, Section I.B.2 of the Fact Sheet."[161] The EPA went on further to note,

> The Final Permit limits are based on the TDS site-specific criterion, developed from the studies of the biological impacts of the TDS observed in the Permittee's effluent on arctic grayling which are found in the receiving water ... Specifically, these studies have shown that compliance with the TDS limits will not impact arctic grayling spawning.[162]

Petitioners also identified scientific evidence suggesting that Arctic grayling, due to the "improved" water quality from Red Dog Mine operations, have started to engage in spawning in the Main Stem of Red Dog Creek,[163] within the area where the permit authorizes a mixing zone for TDS, cyanide and ammonia.[164] EPA conceded this fact in the Final SEIS. Petitioners further noted that even if Teck complies with the 1500 mg/L TDS limit for Red Dog Creek, waters downstream in Ikalukrok Creek could exceed 500 mg/L, which could harm spawning habitat for salmon and Dolly Varden.[165] In response, the EPA noted,

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[161] Ex. 4, EPA Response at 28. The EPA's explanation for removing the limit is as follows:

> In the current permit, an end-of-pipe limit of 3900 mg/L was included for TDS. The primary reason for including this limit was to make assumptions to determine the flow that the facility could discharge and still remain in compliance with in-stream limits. The limit of 3900 mg/L was not a water quality-based effluent limitation but the best professional judgment at the time the permit was modified. During this reissuance, EPA is removing this end-of-pipe limit from the permit based on new information showing that the control of flow is more of a determining factor in controlling the downstream concentration of TDS than is the TDS concentration in the effluent. EPA is replacing the 3900 mg/L in the equations with 110% of the highest measured effluent value.

Ex. 2, Fact Sheet, Appendix C, at 46-47. According to the EPA, the 100% value would be 4697 mg/L for this five-year period. *See* Ex. 4, EPA Response at 55.

[162] Ex. 4, EPA Response at 58.

[163] The EPA did not contest the evidence of spawning activities in the Main Stem of Red Dog Creek, and even conceded such in the Final SEIS at 3-145.

[164] *See* Final SEIS at H-52.

[165] *See* Final SEIS at H-53.

> The Final Permit reflects the currently applicable WQS as documented in the CWA § 401 Certification. This includes requiring demonstration that TDS levels are below 500 mg/L after July 25th of each year at Station 160 where spawning occurs in Ikalukrok Creek. The permit does not require that TDS levels be below 500 mg/L at Station 7, which is located between Stations 150 and 160 on Ikalukrok Creek.[166]

However, Station 160 is several miles downstream from Station 150, which lies at the downstream edge of Mixing Zone 3.[167] The assumption by the EPA regarding the spawning habitat contradicts the Anadromous Stream Catalog published by the Alaska Department of Fish & Game (ADF&G), which indicates that the area immediately below Station 150 (only one mile) is Dolly Varden spawning habitat, and there are King Salmon and Dolly Varden spawning about five miles below Station 150.

The EPA asserts that water quality has improved from pre-mining conditions, "particularly during the past five years. The EPA adds, "This has led to increased fish passage and usage of the Red Dog Creek watershed."[168] As noted previously, this increased use has led to spawning activity for Arctic grayling in the Main Stem of Red Dog Creek where none had previously occurred.[169] If this is the case, then the EPA must ensure that those "improved," existing uses are protected under the antidegradation policy, since those uses have been attained since November of 1975.[170] This permit does not protect the existing use of growth and propagation of fish, and must therefore be remanded.

Evidence in the record demonstrates the 2010 Permit's TDS mixing zones in Main Stem Red Dog Creek and Ikalukrok Creek will impact Arctic grayling. The results of aquatic

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[166] Ex. 4, EPA Response at 54.

[167] *See* Final SEIS at 3-48 (noting the distance from Red Dog Creek to Station 160 as nine miles).

[168] Ex. 4, EPA Response at 60.

[169] *See* Final SEIS at 3-145.

[170] *See* 40 C.F.R. § 131.3(e).

biomonitoring show that 2004 was the year with the lowest density of invertebrates in the Main Stem Red Dog Creek at Station 10, in Ikalukrok Creek above Dudd Creek, and in Ikalukrok Creek at Station 7.[171] Further, Ott and Morris reported that in 2004, larval Arctic grayling disappeared in the Main Stem Red Dog Creek at Station 10, Ikalukrok Creek above Dudd Creek, and in Ikalukrok Creek at Station 7.[172]

EPA's response to comments fails to resolve the issue of increased TDS concentrations in the Main Stem of Red Dog Creek, and instead claims that aquatic life conditions vary from year to year but are nevertheless better than pre-mining conditions.[173] EPA later concedes that TDS levels have *increased* over pre-mining conditions.[174] EPA ignores the increase in TDS as a cause of decreased larval grayling and claims that backsliding is allowed because aquatic life conditions *in general* are improved. To the contrary, the issue is whether the permit reissuance will degrade water quality so as to interfere with existing uses of Arctic grayling growth and propagation.

Overwhelming evidence in the record demonstrates that the new TDS limits interfere with such designated and existing uses when relaxed from the TDS limits in the 1998 permit, regardless of whether other non-TDS conditions may have improved. Brix and Grosell (2005), on which the Final SEIS relies, did not conclude that a 1,500 mg/l level was safe for spawning grayling. Read most expansively, it only potentially supports a TDS concentration of 1,357

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[171] *See supra* at 10.
[172] *See id.*
[173] *See* Ex. 4, EPA Response at 18, 57.
[174] *Id.* at 55, 57 ("EPA agrees that TDS levels in the stream are elevated in comparison to pre-mining data").

mg/l, a level causing 20% effects.[175] Half of the tests yielded lowest-observed effects below 1,500 mg/l, ranging from 254 mg/l to 1,381 mg/l.[176]

EPA concedes in the Final SEIS that the Brix and Grosell study does not find that the permit's TDS limits are safe for Arctic grayling.

> As discussed above, the bioassay tests *are not fully conclusive* that the TDS limit of 1,500 mg/L below the mixing zone in Main Stem Red Dog Creek is fully protective of arctic grayling spawning; however, the evidence is strong that the limit will be protective.[177]

This concession directly contradicts EPA's Response to Comments, wherein EPA claimed that the new TDS limits "will not impact Arctic Grayling."[178] Other evidence in the record, *see supra* at Sections I.C and I.D, demonstrate that much lower levels of TDS are harmful to fish, especially at early life stages.

Paradoxically, the Final SEIS states that a level of 500 mg/l after July 25 is necessary to protect Dolly Varden spawning below station 160 in Ikalukrok Creek.[179] However, Brix and Grosell concluded that there were no observable effects on Dolly Varden spawning at or below 1,500 mg/l.[180] So, EPA allows a 1,500 mg/L concentration of TDS in Main Stem Red Dog Creek during Arctic grayling spawning when not supported by evidence in the record, yet allows only a 500 mg/L concentration of TDS in Ikalukrok Creek below station 160 for Dolly Varden spawning notwithstanding the Brix and Grosell study showing a lower standard does not have the same impact. EPA's decision and responses to comments on what is "protective" for spawning grayling depends not on the safe amount for grayling, but on the amount of dilution

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[175] *See* Final SEIS at 3-153.
[176] *Id.* at Table 3.10-4.
[177] Final SEIS at 3-156 (emphasis added).
[178] Ex. 4, EPA Response at 58.
[179] *See* Final SEIS at 3-157.
[180] *See* Ex. 11 at 19-20.

that TDS concentrations can achieve downstream based on Teck's preferred discharge of effluent from Outfall 001 without more protective pollution controls. Rather than including a TDS effluent limit that is protective of existing uses, the EPA has issued one with which the Permittee would rather comply. EAB should afford no deference to EPA's two-sided application of the same study when EPA has failed to cogently explain its contradictory rationale.[181]

EPA defends the relaxation of TDS standards by claiming that Petitioners should have raised comments about the harmful effects of the relaxed TDS effluent limitations when EPA approved the site specific criterion for TDS.[182] However, the administrative process for approving a site specific criterion does not implicate EPA's duty to ensure that no backsliding occurs.[183] The anti-backsliding duty in section 402(o) applies to EPA when EPA acts on *a permit* modification, renewal, or reissuance and not any other act. *Id.* Furthermore, nothing in the Act or EPA's regulations requires a person to first exhaust administrative remedies when EPA approves a change in a state water quality standard *before* that person may challenge a revised permit for illegal backsliding. Indeed, EPA's own regulations support Petitioners and state that "*all* comments [on proposed permits] shall be considered in making the final decision,"[184] and "any person who filed comments on that draft permit or participated in the public hearing may petition the Environmental Appeals Board to review *any* condition of the permit decision."[185] EPA failed to cite a single provision of the Act or its implementing regulations when it dismissed Petitioners' comments and claimed they should have been raised

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[181] *See, e.g., Teck I*, 11 E.A.D. at 491-93 (noting that EPA did not adequately explain or articulate the justification for the 500 mg/L TDS limit on Arctic grayling populations).

[182] *See* Ex. 4, EPA Response at 55, 60.

[183] *See* 42 U.S.C. § 1342(o).

[184] 40 C.F.R. § 124.11(a) (emphasis added).

[185] 40 C.F.R. § 124.19(a) (emphasis added).

elsewhere, not to mention that the conclusory response completely dodges responding to the legal flaw.[186]

Thus, there is no legal justification for the relaxed TDS limits in the Permit, and EPA's conclusion that the TDS limits will not adversely affect Arctic grayling growth and propagation is clearly erroneous and constitutes an abuse of discretion.

3. EPA's Issuance of the Permit's Monitoring Conditions Constitutes an Abuse of Discretion.

Petitioners commented in opposition to EPA's deletion of effluent monitoring and biological monitoring.[187] EPA responded to comments concerning reduced monitoring by claiming that (1) the only monitoring necessary is that which ensures compliance with the Permit's effluent limitations; (2) bioassessment monitoring is consistent with the ADEC 401 Certification and it is appropriate to defer to ADEC; and (3) EPA has no authority to require third-party monitoring and the Act permits self-monitoring.[188]

EPA's attempt to justify the reduction of monitoring and refusal to monitor compounds associated with mining activities is not supported by the plain language of the CWA, constitutes clear error and is an abuse of discretion. Section 308(a)(A) of the Act confers broad authority on EPA to require monitoring beyond the permit's effluent limitations.[189] EPA absolutely has the

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[186] Additionally, permitting a mixing zone that will directly impact important fish habitat explicitly violates antidegradation policy because it does not protect an existing use: "For example, an activity that lowers the water quality such that a buffer zone must be established within [important fish habitat] is inconsistent with the antidegradation policy." EPA *Water Quality Handbook* at Section 4.4

[187] *See* Final SEIS at H-38, H-43 to H-46, H-179.

[188] *See* Ex. 4, EPA Response at 14-16, 19, and 31-32.

[189] *See* 33 U.S.C. § 1318(a)(A); *see also In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 671-72 (EAB 2001); *In re City of Port St. Joe & Fla. Coast Paper Co.*, 7 E.A.D. 275, 306 (EAB 1997) (holding that section 308(a) confers broad authority on Region to impose monitoring requirements); *In re Liquid Air Puerto Rico Corp.*, 5 E.A.D. 247, 261 n.24 (EAB 1994).

authority to require monitoring of the Red Dog Mine's effluent and ambient conditions in the aquatic environment upstream and downstream of the mine, regardless of whether it is necessary to monitor compliance with permit terms. The fact that EPA has done so historically further demonstrates EPA's abuse of discretion.

EPA also has authority to ensure that the mine complies with water quality standards established under Section 303, 42 U.S.C. § 1313.[190] EPA itself concedes that the biomonitoring is not actually being reduced, just made unenforceable under the CWA by transferring the bulk of biomonitoring requirements to the state solid waste permit.[191]

Finally, while EPA may not compel a third-party to conduct monitoring as EPA correctly observes,[192] EPA does have authority to mandate that the owner or operator of a point source conduct monitoring "as he may reasonably require."[193] EPA's response to comments failed to consider its broad discretion in section 308(a)(A) of the Act, 42 U.S.C. § 1318(a)(A), to require a permittee to conduct such monitoring.[194] Nothing in Section 308 prohibits EPA from requiring a permittee to retain and pay for an independent third-party to monitor effluent or to undertake other monitoring.

EPA's reduction of effluent monitoring, refusal to expand monitoring of compounds not subject to effluent limitations, making most of the biomonitoring unenforceable, and refusing to require Teck to retain an independent monitoring consultant is an abuse of discretion given Teck's long history as a recidivist Clean Water Act violator, specifically with regard to self-monitoring and reporting.

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[190] *See also* 33 U.S.C. §§ 1318(a)(A), 1342(a)(1).
[191] *See* Ex. 4, EPA Response at 15, 19.
[192] *See* Ex. 4, EPA Response at 32.
[193] 33 U.S.C. § 1318(a)(A).
[194] *See* Ex. 4, EPA Response at 32.

For years, the Red Dog Mine has discharged its waste into Red Dog Creek in violation of its NPDES permit. Both the United States in the 1990s and frustrated Kivalina residents in the 2000s went to court to force Teck to comply with the law. During the pendency of the latter enforcement action, Teck knowingly and deliberately diluted the mine's effluent with fresh water from Bons Creek.[195] Despite the evidence of Teck's numerous violations of its permits, as well as Teck's efforts to manipulate monitoring data, EPA chose to ignore its broad authority to mandate monitoring of the mine's compliance with the Clean Water Act by an impartial third party. Teck has proven that it cannot be relied upon to self-monitor and report its own compliance. EPA's failure to consider Teck's grossly inadequate compliance history when deciding to continue allowing self-monitoring, reduce ambient monitoring, and make most biomonitoring unenforceable amounts to an abuse of discretion.

4. The EPA Abused its Discretion by Failing to Require Teck to Discharge at an Alternative Location.[196]

Some Petitioners commented that EPA should "require a wastewater pipeline from the mine to the port site, as envisioned in the Consent Decree in the *Adams v. Teck Cominco* litigation."[197] EPA failed to respond to the comment in the Response to Comments on the NPDES Permit.[198] This violates the implementing regulations and constitutes clear legal error.[199] Instead, EPA responded to the comment in the Final SEIS by claiming that EPA had no authority to mandate an alternative discharge location other than Red Dog Creek.

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[195] *See* Ex. 9.

[196] Only Petitioners Native Village of Kivalina IRA Council and Kivalina Residents raise this issue; Petitioners Native Village of Point Hope IRA Council, Alaska Community Action on Toxics and Northern Alaska Environmental Center do not join in this issue.

[197] *See* Final SEIS at H-14, H-24.

[198] *See generally* Exhibit 4.

[199] *See* 40 C.F.R. § 124.11(a) ("All comments shall be considered in making the final decision and shall be answered as provided in § 124.17"); 40 C.F.R. § 124.17.

> EPA believes that the wastewater pipeline and marine discharge is environmentally preferable as compared to the Red Dog Creek outfall since it will allow Teck greater flexibility in managing the amount of wastewater in the tailings impoundment. However, it is not within our NPDES authority to require Teck to construct the pipeline and change the discharge point.[200]

Petitioners submitted additional comments in response to the Final SEIS that argued EPA had authority under Section 402(a)(1)(B) of the Act to mandate an alternative location and that Teck admitted such an alternative location was feasible.[201] EPA responded in the Record of Decision, but offered no authority for its conclusory statement that it lacked authority to require an alternative discharge location.[202] Tellingly, EPA did not dispute the technical or financial feasibility of a wastewater pipeline to the Chukchi Sea as an alternative discharge location.[203]

Contrary to EPA's response, the agency has broad authority to mandate the alternative discharge point. Section 307 of the Act and 40 C.F.R. § 440.104 subjects the Red Dog Mine to specific effluent limitations for some of the mine's toxic pollution. The mine's TDS discharges, however, are not subject to EPA promulgated effluent limitations and are thus subject to case-by-case regulation in the permit. Teck's historical TDS non-compliance occasioned the Permit's shift from an end-of-the-pipe effluent limitation found in the 1998 Permit (with which Teck never complied) to a four-mile long series of TDS mixing zones in Red Dog Creek and Ikalukrok

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[200] Final SEIS at H-14, H-24.

[201] *See* Letter dated November 6, 2009 from Brent Newell to EPA Region 10, attached as Exhibit 19.

[202] *See* Record of Decision, Appendix B at 1. As an additional ground for sidestepping the issue, EPA contends that other agencies must issue approvals for the wastewater pipeline to be implemented. *See id.* That is true, of course, but that is also the case for the instant decision before EPA: the Corps of Engineers must approve a Clean Water Act section 404 permit for the Aqqaluk expansion to proceed, among other permits. Moreover, Congress had to authorize the right-of-Way for the DeLong Mountain Transportation System road that runs through Cape Krusenstern National Monument in order for the mine to receive its first permit. The Right of Way was beyond EPA's authority, yet EPA issued the mine's first NPDES permit nevertheless. EPA's argument lacks merit and should be disregarded. Even if it had merit, EPA could make the requirement conditional on Teck receiving necessary permits.

[203] *See id.*

Creek predicated on Alaska's illegal § 401 certification based on a site specific criterion. This SSC for TDS was purportedly justified by Brix and Grosell (2005) and paid for by Teck Alaska, possibly pursuant to a 308 Information Request issued by the EPA.[204]

TDS is considered a nonconventional (and nontoxic) pollutant under the CWA.[205] For nonconventional/nontoxic pollutants, Sections 301(b)(1)(C) and 301(b)(2)(A) of the Act,[206] govern the appropriate effluent limitations. *See In re Dominion Energy Brayton Point, L.L.C.*[207] Section 301(b)(1)(C) requires application of water quality standards for TDS discharges and section 301(b)(2)(A) requires best available technology economically achievable, otherwise known as BAT.[208] *Id.* In any given case, the more stringent standard applies.[209]

The determination of BAT for Total Dissolved Solids, then, relies on effluent limitation guidelines promulgated by regulation.[210] Where no effluent limitations guidelines exist, as is the case for mining and TDS, then EPA has authority to impose conditions on a case-by-case basis under its broad authority in section 402(a)(1)(B), called "best professional judgment."[211]

The Ninth Circuit's decision in *NRDC v. EPA* illuminates the issue here and rejects EPA's contention that it lacks authority to consider an alternative discharge location. In *NRDC*,

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[204] *See* Sections I.C. & D, II.C.2.e, *supra*; *Teck I*, 11 E.A.D. at 468.

[205] *See* 40 C.F.R. §§ 401.15 and 401.16 (listing, respectively, the pollutants considered either toxic or conventional); *American. Petroleum Inst. v. EPA*, 787 F.2d 965, 969-70 & n.5 (5th Cir. 1986) (explaining that pollutants not classified as conventional or toxic are generally referred to as "nonconventional/nontoxic" pollutants).

[206] 33 U.S.C. §§ 1311(b)(1)(C) & 1311(b)(2)(A).

[207] 2006 EPA App. LEXIS 9, *24 (Feb. 1, 2006).

[208] *See id.*

[209] *Id.* at *24.

[210] *Id.* at *25 (*citing* 40 C.F.R. § 125.3(c); *Tex. Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 927-28 (5th Cir. 1998)).

[211] *See* 40 C.F.R. § 125.3(c)(2) (where no applicable or promulgated effluent limitation guidelines exist, technology-based analysis to be done on case-by-case basis); 40 C.F.R. § 125.3(a)(2)(i)(B), (v)(B) (effluent limits established case-by-case are based best professional judgment); *see also NRDC v. EPA*, 863 F.2d 1420, 1424-25 (9th Cir. 1988).

the Petitioners challenged EPA's failure to require toxic-laden oil production wastewater to be re-injected in the sub-surface rather than discharged. The Ninth Circuit held that EPA did not act arbitrarily and capriciously in declining to determine whether an alternative discharge was BAT.[212] In so holding, the Ninth Circuit recognized EPA's authority to consider means other than end-of-pipe effluent limits as BAT, including pumping the waste deep underground and away from sensitive waters.[213]

The Authority under section 402(a)(1)(B)'s plain language is very broad: EPA may impose "such conditions as the Administrator determines are necessary to carry out the provisions of this Act."[214] In applying this authority, EPA shall consider the "appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information" and any "unique factors relating to the applicant."[215] The regulations implementing best professional judgment specifically allow EPA to employ non-treatment techniques for achieving water quality standards.[216]

Accordingly, EPA has authority under section 402(a)(1)(B) to require an alternative discharge location on the Chukchi Sea via wastewater pipeline in lieu of allowing TDS mixing zones in Red Dog Creek and Ikalukrok Creek. Nothing in the Act or the implementing regulations restricts this authority in a manner that would disallow changing the outfall location for Red Dog Mine's effluent. Nor did EPA or Teck assert during the administrative process that a wastewater pipeline to the Chukchi Sea was infeasible. Indeed, EPA expressed its preference for the wastewater pipeline as a means to manage the amount of contaminated wastewater in the

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[212] *See NRDC v. EPA*, 863 F.2d at 1428.
[213] *See id.*
[214] 33 U.S.C. § 1342(a)(1)(B).
[215] 40 C.F.R. §§ 125.3(c)(2)(i) & (ii).
[216] *See* 40 C.F.R. § 125.3(f).

tailings impoundment.[217] Teck also concedes that the wastewater pipeline is feasible.[218] EPA was especially empowered to consider the "unique factors" relating to Teck, including its chronic history of polluting Wulik River tributaries and its warranty that construction of a wastewater pipeline to avoid further despoiling of the Wulik River system was feasible. It was thus a clear error of law and an abuse of discretion for EPA to refuse to exercise its authority to require Teck Alaska to discharge its effluent at an outfall on the Chukchi Sea.

III. CONCLUSION

For the foregoing reasons, the Petitioners respectfully request that the EAB either remand the Permit to the EPA Region 10 to correct the various legal errors, or grant the Petitioners the opportunity for a full review before the Board. EPA Administrator Lisa P. Jackson recently stated that the EPA would initiate measures to address "impairment from surface mining" and "include environmental justice principles in all of [EPA's] decisions . . .," noting that protecting vulnerable populations was "a top priority."[219] With this Permit, which impermissibly relies on an illegal State antidegradation analysis and authorizes significant backsliding in violation of the Act, the EPA has not protected water quality in Red Dog Creek, Ikalukrok Creek or the Wulik River from impairment from surface mining nor has it met the goal of the CWA to at least maintain water quality, if not eliminate pollutant discharges altogether. This allows the further pollution of Kivalina's drinking water supply and subsistence food resource and discharging those pollutants into the Chukchi Sea, dishonoring the EPA Administrator's stated goals and the letter and spirit of the Clean Water Act.

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[217] *See* Final SEIS at H-14, H-24.

[218] *See Adams v. Teck Cominco*, A:04-cv-0049 (JWS), Consent Decree at 2, attached as Exhibit 21.

[219] Memorandum from Lisa P. Jackson, Administrator to All Employees, dated January 12, 2010, attached as Exhibit 20.

Respectfully submitted this 15th day of February, 2010.

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