IN RE TECK COMINCO ALASKA INCORPORATED, RED DOG MINE

NPDES Appeal No. 03-09

ORDER DENYING REVIEW IN PART AND REMANDING IN PART

Decided June 15, 2004

Syllabus

Kivalina Relocation Planning Committee ("KRPC") seeks review of Region 10's decision to issue a Final Permit Modification changing certain conditions of the National Pollution Discharge Elimination System ("NPDES") permit held by Teck Cominco Alaska Incorporated ("Teck Cominco") for its Red Dog Mine (the "Mine"). The NPDES permit authorizes Teck Cominco to discharge wastewater from the Mine into the Red Dog Creek, which is a tributary of Ikalukrok Creek in Northwest Alaska. The Permit Modification would establish new, less stringent limits for the Mine's discharges of Total Dissolved Solids ("TDS"). The Permit Modification establishes in-stream TDS concentration limits that include: (1) in the Mainstem of Red Dog Creek, a limit of 500 mg/l in the spring during arctic grayling spawning, and 1,500 mg/l after arctic grayling spawning; and (2) in Ikalukrok Creek, a limit of 1,000 mg/l prior to salmon spawning, and, during salmon spawning after July 25 of each year, a limit of 500 mg/l at station 160 located in Ikalukrok Creek.

KRPC argues in its petition that (1) the Region's decision to issue the Permit Modification with a less stringent, in-stream TDS limit of 500 mg/l applicable during salmon spawning is not supported by the evidence in the record; (2) the Region erred in concluding that it has authority under 40 C.F.R. § 122.62 to issue the Permit Modification; (3) the Permit Modification violates the "antibacksliding" provision, 33 U.S.C. § 1342(o), because it contains less stringent effluent limits than the limits in the permit previously issued to Teck Cominco for the Red Dog Mine; and (4) the Permit Modification's TDS limits applicable to Red Dog Creek during arctic grayling spawning and to Ikalukrok Creek during salmon spawning violate Alaska's antidegradation regulations and 40 C.F.R. § 122.4. KRPC principally focuses on the impact on fish spawning from the 500 mg/l limit applicable to Red Dog Creek during arctic grayling spawning in the springtime (Permit Condition I.A.8.c) and on the 500 mg/l limit applicable in Ikalukrok Creek after July 25 of each year during salmon spawning (Permit Condition I.A.8.e.3). The central theme of KRPC's Petition is that a scientific report, known as the "ASTF Study," which the Region relied upon in deciding to issue the Permit Modification, contradicts the Region's conclusion that the new, less stringent TDS limits will have no adverse effects on spawning of arctic grayling and chinook (king) salmon.

Held: The Board denies KRPC's petition in part, grants the petition in part, and remands the Permit Modification to the Region for further proceedings.

1. The Board rejects KRPC's argument that 40 C.F.R. § 122.62(a)(3)(i) prohibits modification in this case until EPA publishes in the Federal Register its approval of Alaska's amended statewide and site-specific water quality criteria. The Board holds that section 122.62(a)(3)(i)(C) does not establish a deadline for submitting a modification request in circumstances where, as here, no Federal Register publication of the predicate action is required by other law. Therefore, the fact that the Region's approval of Alaska's amended statewide and site-specific water quality criteria was not published in the Federal Register did not bar the Region's issuance of the permit modification based on such approval since Federal Register publication of such approval was not otherwise required by law.

2. The Board finds that KRPC's antidegradation arguments with respect to the TDS limit applicable to Ikalukrok Creek during salmon spawning after July 25 of each year were not preserved for appeal because they were not raised during the public comment period. The Board also finds, however, that KRPC's antidegradation arguments with respect to the TDS limit applicable to the Mainstem of Red Dog Creek during arctic grayling spawning were preserved for appeal. Generally, persons seeking review of a permitting decision under 40 C.F.R. part 124 must demonstrate that any issues being raised were raised during the public comment period. However, issues pertaining to changes from the draft to final permit decision may be raised for the first time on appeal. In the present case, the Permit Modification's condition limiting discharges during arctic grayling spawning (Permit Condition I.A.8.c) is a change from what was proposed in the draft permit modification and, accordingly, issues concerning that condition may be raised on appeal even if the issues were not raised during the public comment period. In contrast, the in-stream TDS limit in Ikalukrok Creek during king salmon spawning (Permit Condition I.A.8.e.3) was not changed between the draft and the final permit modification, and KRPC has not demonstrated that any public comment identified Alaska's antidegradation regulation as necessitating a more stringent TDS limit applicable to Ikalukrok Creek during salmon spawning.

3. The Board remands the TDS limit applicable during arctic grayling spawning to the Region for further proceedings. The Region failed to explain why, on July 17, 2003, it concluded that the Permit Modification does not violate Alaska's antidegradation rule when, one day earlier, on July 16, 2003, the Region had concluded that it did not have sufficient information to approve that same 500 mg/l TDS concentration as a site-specific water quality criterion and had issued an information request to Teck Cominco instructing it to conduct further studies to determine the TDS limit that would be protective of arctic grayling spawning. The evidence relied upon by the Region in its July 16 decision not to approve the arctic grayling spawning season portion of the site-specific water quality criterion was the ASTF Study that KRPC cites as support for its arguments for review of the Permit Modification. Without a detailed explanation for these two, seemingly contradictory decisions, the Board is unable to determine that the Region's decision to issue the Permit Modification was other than arbitrary and capricious.

4. The Board denies review of the limit applicable during salmon spawning after July 25 of each year for two reasons. First, the applicable regulation, 40 C.F.R. § 124.19(a), requires a petitioner to explain in the petition why the permit decisionmaker's previous response to the comments submitted during the public comment period is clearly erroneous or otherwise warrants review. KRPC's one sentence argument, supported by one citation, without any reference to the Region's extensive response to comments, does not satisfy the threshold requirement of explaining why the Region's response to comments is clearly erroneous. Second, to the extent KRPC argues that evidence in the record shows that Alaska's statewide water quality criterion for TDS is not adequately protective of the aquatic life "designated use" for Ikalukrok Creek, KRPC's argument is a challenge to the

water quality standard itself and may not be heard in this forum. Evaluation of whether the water quality criteria are protective of the designated uses is part of the Agency's process for approving state water quality standards, and threshold issues pertaining to whether the Agency may have erred in approving the standard in the first instance are beyond the Board's jurisdiction.

5. With one exception, the Board denies KRPC's argument that the Permit Modification's less stringent TDS limits violate the "antibacksliding" prohibition in 33 U.S.C. § 1342(o). KRPC has made no attempt to demonstrate that questions regarding compliance with 33 U.S.C. § 1342(o) were raised during the public comment period. However, because the Permit Modification's TDS limit applicable to Red Dog Creek during arctic grayling spawning was significantly changed from the draft to the final permit, KRPC's antibacksliding argument may be considered on appeal to the extent that the argument relates to the TDS limit applicable during arctic grayling spawning. Because Agency policy favors final adjudication of most permits at the Regional level and because the Board determined to remand this limit on other grounds, the Board also remands the antibacksliding argument relative to the limit applicable to the Mainstem of Red Dog Creek during arctic grayling spawning for consideration as appropriate during the remand proceeding.

Before Environmental Appeals Judges Scott C. Fulton, Edward E. Reich, and Kathie A. Stein.

Opinion of the Board by Judge Reich:

I. *INTRODUCTION*

Kivalina Relocation Planning Committee ("KRPC") filed a timely petition seeking review of the decision by U.S. EPA Region 10 ("Region") to issue a Final Permit Modification, dated July 17, 2003 (the "Permit Modification"), which would change certain conditions of the Clean Water Act ("CWA") National Pollution Discharge Elimination System ("NPDES") permit[1] held by Teck Cominco Alaska Incorporated ("Teck Cominco") for its Red Dog Mine (the "Mine"). The NPDES permit authorizes Teck Cominco to discharge wastewater from the Mine into the Red Dog Creek, which is a tributary of Ikalukrok Creek in Northwest Alaska. The Permit Modification would establish new, less stringent limits for the Mine's discharges of Total Dissolved Solids ("TDS"). *See* Administrative Record ("Admin. Rec.") #61 at 7-8 (Final Permit Modification, (July 17, 2003)). The existing NPDES permit, which was issued to Teck Cominco in 1998, limited TDS in the Mine's discharges to 176 milligrams per liter ("mg/l") (monthly average limit) and 196 mg/l (maximum daily limit). The Permit Modification establishes TDS concentration limits at various points downstream from the discharge point in the

[1] Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant from a point source into waters of the United States, except if the discharge is made in compliance with, among other things, an NPDES permit issued under CWA § 402, 33 U.S.C. § 1342. The NPDES program is the principal permitting program under the CWA. *See* CWA § 402, 33 U.S.C. § 1342.

Mainstem of Red Dog Creek and in Ikalukrok Creek. Specifically, those limits on in-stream TDS concentration include: (1) in the Mainstem of Red Dog Creek, a limit of 500 mg/l in the spring during arctic grayling spawning, and 1,500 mg/l after arctic grayling spawning; and (2) in Ikalukrok Creek, a limit of 1,000 mg/l prior to salmon spawning, and, during salmon spawning after July 25 of each year, a limit of 500 mg/l at station 160 located in Ikalukrok Creek. *Id.*

KRPC argues in its petition that: (1) the Region's decision to issue the Permit Modification with a less stringent, in-stream TDS limit of 500 mg/l applicable during salmon spawning is not supported by the evidence in the record; (2) the Region erred in concluding that it has authority under 40 C.F.R. § 122.62 to issue the Permit Modification; (3) the Permit Modification violates 33 U.S.C. § 1342(o) because it contains less stringent effluent limits than the limits in the permit previously issued to Teck Cominco for the Red Dog Mine; and (4) the Permit Modification's TDS limits applicable to Red Dog Creek during arctic grayling spawning and to Ikalukrok Creek during salmon spawning violate Alaska's antidegradation regulations and 40 C.F.R. § 122.4. *See* Kivalina Relocation Planning Committee's Petition for Review (Aug. 14, 2003) (hereinafter "Petition"). As will be explained below, KRPC principally focuses on the impact on fish spawning from the 500 mg/l limit applicable to Red Dog Creek during arctic grayling spawning in the springtime (Permit Condition I.A.8.c) and on the 500 mg/l limit applicable in Ikalukrok Creek after July 25 of each year during salmon spawning (Permit Condition I.A.8.e.3).

Although KRPC separated its arguments into four issues, the central theme of KRPC's Petition is that a scientific report, often referred to by the parties as the "ASTF Study" or the "Stekoll Report," which the Region relied upon in making its decision to issue the Permit Modification, contradicts the Region's conclusion that the new, less stringent TDS limits will have no adverse effects on spawning of arctic grayling and chinook (king) salmon. The full name of the report is *Salmon as a Bioassay Model of Effects of Total Dissolved Solids* (prepared for Alaska Science and Technology Foundation) (Feb. 3, 2003) by Michael S. Stekoll, William W. Smoker, Ivan A. Wang, and Barbi J. Failor. Administrative Record #16 (hereinafter "ASTF Study").

As explained more fully in our discussion in Part III below, we have decided to remand the permit conditions applicable during arctic grayling spawning for further proceedings consistent with this decision. Briefly, Alaska's antidegradation rule, in accordance with the federal antidegradation rule, prohibits discharges that would impair an existing use of the water body. The term "existing use" is defined in this context as any use that was attained in the water body on or after November 28, 1975. With respect to the permit condition allowing in-stream TDS concentrations up to 500 mg/l in the Mainstem of Red Dog Creek during arctic grayling spawning, we conclude that the Region failed to explain why, on July 17, 2003, it concluded that the Permit Modification does not violate Alaska's

antidegradation rule when, one day earlier, on July 16, 2003, it had concluded that it did not have sufficient information to approve that same 500 mg/l TDS concentration as a site-specific water quality criterion and had issued an information request to Teck Cominco instructing it to conduct further studies to determine the TDS limit that would be protective of arctic grayling spawning. The evidence relied upon by the Region in its July 16 decision not to approve the arctic grayling spawning season portion of the site-specific water quality criterion was the ASTF Study that KRPC cites as support for its arguments for review of the Permit Modification. Without a detailed explanation for these two, seemingly contradictory decisions, we are unable to determine that the Region's decision to issue the Permit Modification was other than arbitrary and capricious.

With one exception also related to the permit condition applicable to TDS concentrations in the Mainstem of Red Dog Creek during arctic grayling spawning, we deny review of all other issues raised in the Petition. Briefly, with respect to the limit applicable to Ikalukrok Creek during salmon spawning, we conclude, as explained below, that KRPC has not demonstrated that the issues it raises on appeal regarding whether this limit complied with Alaska's antidegradation regulation were raised during the public comment period, a prerequisite to seeking review of this issue. Further, to the extent that KRPC challenges this limit based on the ASTF Study, KRPC failed to demonstrate in its Petition why the Region's response to comments was clearly erroneous. We also reject KRPC's argument that 40 C.F.R. § 122.62 does not authorize a permit modification under the circumstances of this case.

In addition, with one exception, we reject KRPC's argument that the Permit Modification violates the "antibacksliding" provisions of 33 U.S.C. § 1342(o). The antibacksliding argument was not raised during the public comment period; therefore, as a general proposition, it was not preserved for appeal. However, with respect to the antibacksliding implications of the TDS limit applicable during arctic grayling spawning in Red Dog Creek, we find that an appeal can be taken because the TDS limit changed significantly between the draft and final Permit Modification. Since we are remanding this limit based on antidegradation concerns, we are also remanding the antibacksliding argument for the Region to consider as appropriate during the remand proceeding.

II. *BACKGROUND*

A. *Factual Background*

Teck Cominco's Red Dog Mine is located in northwest Alaska. The Mine is located in the drainage area of the Middle and North Forks of Red Dog Creek, which drains the western foothills of the DeLong Mountains. Admin. Rec. #15 at 9 (U.S. EPA, Environmental Assessment, Red Dog Mine NPDES Permit Modifi-

cation (Jan. 2003)). The Middle and North Forks of Red Dog Creek join to form the Mainstem Red Dog Creek. *Id.* at 9. Red Dog Creek flows into the Ikalukrok Creek, which is a major tributary of the Wulik River. The Wulik River is a sizable river that drains into the Chukchi Sea near the Native Village of Kivalina. *Id.* at 9-12.

The petitioner, KRPC, is a seven-member body appointed by the Native Village of Kivalina IRA Council and the Kivalina City Council to address planning issues in the Native Village of Kivalina. Admin. Rec. #39 at 1 (Letter from Luke Cole, attorney for KRPC, to Hanh Gold, U.S. EPA Region 10 (May 13, 2003)). Members of KRPC reside in Kivalina, drink water from the Wulik River, and hunt, fish, and gather food in the vicinity of the Mine for their basic subsistence. *Id.* at 1-2.

The Mine began operations in 1988. Admin. Rec. #26 at 5 (Fact Sheet for the draft permit modification). The Mine contains a mill that processes lead and zinc ore into concentrate. To store wastewater and tailings (the finely ground waste rock separated during processing), Teck Cominco constructed a tailings impoundment by building a dam near the mouth of the South Fork of Red Dog Creek. Contaminated water from all sources is collected in the tailings impoundment, and is then treated to remove toxic metals. Admin. Rec. #26 at 6. The treated water is discharged into the Middle Fork of the Red Dog Creek at rates up to 14,000 gallons per minute. *Id.* The water treatment process involves the addition of lime to the effluent to precipitate zinc, lead, and iron; and the addition of sodium sulfide to precipitate cadmium. While reducing toxic metals concentrations in the effluent, this treatment process has the side effect of raising the concentration level of TDS in the effluent,[2] primarily through calcium and sulfate ions released by the precipitating agents. Admin. Rec. #15 at 1, 12. The Mine's discharge season is limited by its permit to a period from May to October because at other times the wastewater is frozen. Admin. Rec. #26 at 6.

It is undisputed that the Red Dog Creek and Ikalukrok Creek watersheds support several species of cold-water fish. The Mainstem and North Fork Red Dog Creek support spawning of arctic grayling and rearing of arctic grayling, Dolly Varden and slimy sculpin. Admin. Rec. #15 at 13-15. Ikalukrok Creek is a spawning area for arctic grayling, chum salmon, chinook (king) salmon, sockeye salmon, and Dolly Varden. *Id.*; *see also* Admin. Rec. #12 (Memorandum by Alvin G. Ott, *et al.*, Alaska Dept. of Fish and Game, to Pete McGee, *et al.*, Northern Reg., Alaska Dept. of Envtl. Conservation (July 27, 2002)); Admin. Rec. #51 at 1 (Memorandum from Michael W. Letourneau, Environmental Scientist, Office of

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[2] TDS generally consists of inorganic salts and small amounts of organic matter dissolved in water. The principal components of TDS are carbonates, chlorides, sulfates, potassium, magnesium, calcium, and sodium. Admin. Rec. #26 at 5.

Ecosystems and Communities, U.S. EPA Region 10 to Robert Robichaud, Office of Water (July 7, 2003) ("[K]ing and chum salmon are known to spawn in these waters").

B. *Statutory and Regulatory Background*

1. *Permits and Effluent Limits*

The CWA prohibits the discharge of any pollutant to waters of the United States from a point source, except if made in compliance with the Act's requirements. CWA § 301(a), 33 U.S.C. § 1311(a). Section 402 of the CWA authorizes the EPA Administrator to issue permits for the discharge of pollutants, provided that certain requirements identified in the statute are satisfied. CWA § 402(a), 33 U.S.C. § 1342(a). In particular, section 402(a)(2) states that the "Administrator shall prescribe conditions for such permits to assure compliance with the requirements of" section 402(a)(1). CWA § 402(a)(2), 33 U.S.C. § 1342(a)(2). Section 402(a)(1), in turn, provides that permitted discharges must, among other things, comply with sections 301 and 306. CWA § 402(a)(1), 33 U.S.C. § 1342(a)(1).

Section 301 of the CWA provides that NPDES permits must, among other things, contain conditions requiring two different types of effluent limits for point sources: those based on the technology available to treat a pollutant and those necessary to protect the uses of the receiving water body. The first type of effluent limit, known as technology-based limits, reflects a specified level of pollutant-reducing technology required for the type of facility that is being permitted. CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) ("there shall be achieved * * * effluent limitations for point sources * * * (i) which shall require the application of the best practicable control technology currently available"). The second type of effluent limit, known as water quality-based effluent limits, applies when technology-based effluent limits are not sufficient to meet the applicable state water quality standards. In particular, section 301 requires achievement of "any more stringent limitation, including those necessary to meet water quality standards * * * established pursuant to any State law or regulation * * * ." CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C). The permit conditions at issue in the present case are water quality-based effluent limits, not technology-based effluent limits.[3]

The statutory requirement of CWA § 301(b)(1)(C) to protect water quality standards has been implemented through a variety of regulatory provisions, including long-standing Agency regulations that prohibit the issuance of a permit "when imposition of conditions cannot *ensure* compliance with the applicable

[3] EPA has not developed technology-based effluent limitations for TDS for ore mining facilities. Admin. Rec. #26 at 8.

water quality requirements of all affected states." 40 C.F.R. § 122.4(d) (emphasis added). In addition, section 122.44(d) provides that the permit must contain effluent limits as necessary to protect water quality standards. *Id.* § 122.44(d)(1).

2. *Water Quality Standards — General Requirements*

States are primarily responsible for establishing the water quality standards applicable to water bodies within their borders. The CWA requires states to adopt water quality standards designed to protect the public health or welfare, enhance water quality, and advance the purposes of the CWA. CWA § 303(c)(2), 33 U.S.C. § 1313(c)(1).[4] Water quality standards developed by the states must be submitted for review by the Agency. CWA § 303(c)(1), 33 U.S.C. § 1313(c)(1). The Agency must examine water quality standards adopted and certified by the state to determine if they conform with the CWA and will support the uses designated by the state. *See id.*; 40 C.F.R. § 131.5.

State water quality standards have three components: (1) one or more "designated uses" for each water body or water body segment; (2) water quality "criteria;" and (3) an antidegradation policy. CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-.12.[5] The "designated uses" component functions as a classification system that identifies water bodies based on the goals for the expected beneficial use of the water body. U.S. EPA Office of Water, NPDES Permit Writers' Manual § 6.1.1, at 89 (1996). The second component, water quality "criteria," consists of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the "designated uses" of that water body. *Id.* Although states frequently establish statewide water quality criteria, the CWA also allows states to develop criteria that reflect site-specific conditions based on Agency guidance. CWA § 304(a), 33 U.S.C. § 1314(a); 40 C.F.R. § 131.11(b)(1)(ii).

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[4] The Governor of the state or the water pollution control agency of the state also must periodically review its water quality standards, and, if appropriate, modify and adopt new standards. CWA § 303(c)(1), 33 U.S.C. § 1313(c)(1).

[5] The CWA and its implementing regulations require that the water quality standards "be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and also taking into consideration their use and value for navigation." CWA § 303(c)(2), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.10(a). The regulations provide that water quality standards are "provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses." 40 C.F.R. § 131.3(i). Water quality criteria are, in turn, "elements of State water quality standards, expressed as constituent concentrations, levels or narrative statements" aimed to attain and maintain each designated use. 40 C.F.R. § 131.3(b).

The third component of state water quality standards, the "antidegradation" policy, focuses on protecting "existing uses" by generally prohibiting degradation of water quality below that necessary to maintain existing uses.[6] Each state's antidegradation policy must comply with the federal antidegradation policy. 40 C.F.R. § 131.12; *see also* U.S. EPA Office of Water, NPDES Permit Writers' Manual § 6.1.1, at 90 (1996).

The federal antidegradation policy establishes three tiers of protection. The first tier, which is relevant to the present case, establishes a standard that is applicable to all waters, and requires that all "existing uses" of a water body and the level of water quality necessary to protect those existing uses be maintained and protected.[7] 40 C.F.R. § 131.12(a)(1). EPA has consistently stated that this provision establishes the "absolute floor of water quality in all waters of the United States." Water Quality Standards Regulation, 48 Fed. Reg. 51,400, 51,403 (Nov. 8, 1983); *accord* Water Quality Standards Regulation (Advance Notice of Proposed Rulemaking), 63 Fed. Reg. 36,742, 36,781 (July 7, 1998). This means that "the water quality in the water body may be lowered only to the point at which the water quality is sufficient to protect and maintain all existing uses, and that it is not permissible to allow water quality to be lowered to the extent that any existing use is impaired." Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20,802, 20,886 (Aug. 16, 1993).

Notably, the focus of the antidegradation policy is on "existing uses," rather than "designated uses," which is the focus of the first two components of water quality standards. The Agency has explained the difference between these two concepts as follows:

> Designated uses are defined as those uses specified in water quality standards for each water body or segment whether or not they are being attained. EPA interprets existing uses as those uses actually attained in the water body on or after November 28, 1975 (the date of EPA's initial water quality standards regulation), whether or not they are included in water quality standards. 40 C.F.R. § 131.3(e). Designated uses focus on the attainable condition while existing uses focus on the past or present condition.

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[6] States must "develop and adopt a statewide antidegradation policy" that will, with limited exceptions, maintain and protect "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses * * * ." 40 C.F.R. § 131.12.

[7] The second and third tiers are oriented to the protection and maintenance of water bodies that have been designated as high quality water bodies and outstanding water bodies respectively. 40 C.F.R. § 131.12(a)(2)-(3).

Water Quality Standards Regulation (Advance Notice of Proposed Rulemaking), 63 Fed. Reg. 36,742, 36,748 (July 7, 1998).

3. *Alaska's Water Quality Standards*

The State of Alaska's water quality standards are set forth in Title 18, Chapter 70 of Alaska's Administrative Code and are administered by the Alaska Department of Environmental Conservation ("ADEC"). Admin. Rec. #6. These provisions describe classes and subclasses of uses to be protected, establish criteria supporting such uses, and designate uses for waters in the State. *Id.* (Alaska Admin. Code tit. 18, §§ 70.020, .050, .230, .235 (1999)). Alaska's regulations also include conditions for establishing site-specific criteria for water bodies in Alaska, *id.* at 36 (Alaska Admin. Code tit. 18, § 70.235 (1999)[8]), and an antidegradation policy, *id.* at 4 (Alaska Admin. Code tit. 18, § 70.015 (1999)). Alaska's antidegradation policy provides in relevant part as follows:

> It is the state's antidegradation policy that
>
> > (1) existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected; * * *.

Id. at 4 (Alaska Admin. Code tit. 18, § 70.015 (1999)). Alaska defines "existing uses" consistent with the federal policy: "'existing uses' means those uses actually attained in a waterbody on or after November 28, 1975." *Id.* at 51 (Alaska Admin. Code tit. 18, § 70.990(24) (1999)).

Alaska's state water quality standards, as pertinent to this case, have designated the following uses for both the Mainstem of Red Dog Creek and Ikalukrok Creek: industrial, contact recreation wading only, secondary recreation, and growth and propagation of fish, shellfish, other aquatic life, and wildlife. *Id.* at 32-33 (Alaska Admin. Code tit. 18, § 70.230(e)(8), (18) (1999)). In 1999, Alaska revised its statewide water criteria for TDS. Prior to this change, the statewide water criteria limited TDS concentrations to "one-third above background." Admin. Rec. #15 at 1. The statewide criteria adopted in 1999, for waters designated as used for aquatic life, provides that TDS may not exceed 1,000 mg/l and that "[a] concentration of TDS may not be present in water if that concentration causes or reasonably could be expected to cause an adverse effect to aquatic life." Admin. Rec. #6 at 9 (Alaska Admin. Code tit. 18, § 70.020 (1999)). These statewide criteria also provide as follows:

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[8] Alaska's regulations also identify water bodies in the State for which ADEC has established site-specific criteria for designated use classes pursuant to the conditions in Alaska Administrative Code, Title 18 § 70.235 (1999).

> If a permit applicant proposes to raise the TDS levels in the receiving water to result in a concentration in the waterbody between 500 mg/l and 1,000 mg/l for all sources * * * the department will require a permit applicant to provide information that the department identifies as necessary to determine if the proposed TDS level will cause or can reasonably be expected to cause an adverse effect to aquatic life; based on its analysis, the department will limit the TDS level in the waterbody as necessary to prevent an adverse effect, and will set permit effluent limits accordingly; the burden of proof to demonstrate no adverse effect is on the permit applicant; * * *

Id. at 22-23 (Alaska Admin. Code tit. 18, § 70.020 n.15 (1999)).

EPA approved the amended statewide water quality criteria for TDS on April 29, 2002, some three years after the State of Alaska's revision. Admin. Rec. #11 (Letter from Randall F. Smith, Director Office of Water, U.S. EPA Region 10, to Michelle Brown, Commissioner, ADEC (Apr. 29, 2002)).[9]

4. *Alaska's Site-Specific Water Quality Criteria for Mainstem of Red Dog Creek*

In January 2001, Teck Cominco requested ADEC to develop a site-specific criterion for TDS in the Mainstem of Red Dog Creek. Admin. Rec. #8 at 1. Thereafter, ADEC adopted and submitted to EPA for approval a TDS site-specific criterion of 1,500 mg/l for the Mainstem of Red Dog Creek outside of arctic grayling spawning season, as well as a 500 mg/l TDS limit for the Mainstem of Red Dog Creek during the arctic grayling spawning season. Admin. Rec. #60 at 1 (Letter from Randall F. Smith, Director Office of Water, U.S. EPA Region 10, to Ernesta Ballard, Commissioner, ADEC (July 16, 2003)).

On July 16, 2003, one day before the Region made its decision to issue the Permit Modification at issue in this matter, the Region approved the site-specific water criterion for TDS of 1,500 mg/l in the Mainstem of Red Dog Creek after the arctic grayling spawning season. *Id.* In approving the 1,500 mg/l site-specific criterion for TDS outside the arctic grayling spawning season, the Region noted that ADEC had adequately demonstrated that the site-specific criterion "is scientifically defensible and the [site-specific criterion] will protect all designated and existing uses." *Id.* at 7. EPA, however, declined to act on the proposed 500 mg/l site-specific criterion during the arctic grayling spawning season on the grounds

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[9] EPA had previously, on September 29, 2000, and September 28, 2001, approved certain other changes to Alaska's water quality standards. Admin. Rec. #11 at 1.

that the recently issued ASTF Study "provides evidence that TDS of a composition similar to that present in the Red Dog Mine effluent has impacts on fertilization success in some salmonid species." *Id.* at 1.[10] The Region stated that it would send a section 308 information request[11] to Teck Cominco requiring tests to be performed to determine the effects of TDS on the spawning success of arctic grayling with the goal of determining "whether a more stringent criteria is required to protect spawning arctic grayling." *Id.*

C. *Procedural Background*

Teck Cominco's first NPDES permit for discharges from its Red Dog Mine was issued in 1985 and expired in 1990. Admin. Rec. #26 at 6. That permit was administratively extended until the permit was reissued in 1998. *Id.* The 1998 permit contained more stringent effluent limitations than the original one, limiting concentrations of TDS in the Mine's effluent to 1/3 above background levels, which limits were determined to be 176 mg/l (monthly average limit) and 196 mg/l (maximum daily limit). *Id.* These effluent limitations were based on Alaska's statewide water quality criterion for TDS that was in effect at the time of permit issuance in 1998. *Id.* Since the permit was reissued in 1998 with these more stringent limits, the Mine has not been able to comply with the effluent limits for TDS.[12] EPA issued a compliance order to the Mine in 1999, and modified it in 2000, 2001, and 2002. Admin. Rec. #26 at 6. As a result of these compliance orders, the Mine was required by EPA to meet certain interim discharge limits, and to meet the effluent limits under the 1998 permit by August 28, 2003. *Id.*

On March 20, 2003, the Region received Teck Cominco's request that the Permit's conditions for TDS be modified. Certified Index of the Administrative Record at 3. The modification Teck Cominco requested included an increase in the discharge limitations for TDS to be consistent with the proposed site-specific

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[10] *See also* Admin. Rec. #55 at 3 (Memorandum from Michael W. Letourneau, Environmental Scientist, Office of Ecosystems and Communities, U.S. EPA Region 10 to Robert Robichaud, Office of Water (July 7, 2003)) ("[I]t is strongly recommended that tests be performed to determine the effects of TDS with a composition similar to that found in Red Dog Mine effluent on the spawning success of Arctic grayling and Dolly Varden.").

[11] Section 308 of the CWA grants the EPA Administrator broad authority to require owners and operators of point sources to, among other things, "provide any such other information as [the Administrator] may reasonably require." CWA § 308(a)(4)(A), 33 U.S.C. § 1318(a)(4)(A); *see also In re Liquid Air P. R. Corp.*, 5 E.A.D. 247, 261-62 n.24 (EAB 1994) (noting that section 308's broad information-gathering authority may be used to aid enforcement, to develop permit limitations and effluent standards, and to generate whatever information the Agency needs to carry out its statutory responsibilities, subject only to a reasonableness standard).

[12] The Agency reported in the Fact Sheet for the draft permit modification that the median concentration of the Mine's effluent was 3,430 mg/l in 2002. Admin. Rec. #26 at 6.

criterion applicable to the Mainstem of Red Dog Creek and the new statewide criterion. Admin. Rec. #26 at 4-5, 8. Teck Cominco also requested that ADEC approve mixing zones in both the Mainstem of Red Dog Creek and in Ikalukrok Creek outside of which water quality could not exceed the TDS limits, but inside of which those limits would not apply.[13] The proposed mixing zone in Red Dog Creek would extend 1,930 feet after the confluence of the Middle Fork and North Fork of the Red Dog Creek, while the proposed mixing zone for Ikalukrok Creek would begin at the confluence of the Mainstem Red Dog Creek and Ikalukrok Creek and extend downstream for 3,240 feet. *Id.* at 7-8.

On March 25, 2003, the Region transmitted public notice of the draft permit modification and Fact Sheet describing the modification and inviting comment from the public. Certified Index of the Administrative Record at 3. The draft permit modification proposed less stringent TDS limits that would allow discharges subject to in-stream TDS concentrations not exceeding 1,500 mg/l in Red Dog Creek after the arctic grayling spawning season until the end of the discharge season, and not exceeding 1,000 mg/l in Ikalukrok Creek after the end of the arctic grayling spawning season until the beginning of the salmon and Dolly Varden spawning season, at which time the in-stream TDS concentration would not exceed 500 mg/l at Station 160 in Ikalukrok Creek until the end of the discharge season. Admin. Rec. #26 at 4-5, 8. The draft permit modification would not have allowed any effluent discharges "until after the Arctic grayling have completed spawning in Mainstem Red Dog Creek (spring)." *Id.* at 8.[14] The draft permit modification also included the mixing zones requested by Teck Cominco. *Id.* The period for the public to comment on the draft permit modification began March 31, 2003, and ended on May 14, 2003. Admin. Rec. #62 at 1.

KRPC, among others, submitted comments on the draft permit modification. Admin. Rec. #39 (Letter from Luke Cole, Center on Race, Poverty & the Environment, to Director, Office of Water, U.S. EPA Region 10 (May 13, 2003)). KRPC and others questioned whether the water quality-based limits in the draft permit modification would be sufficiently protective of spawning salmon. *Id.* at 2-3, 9, 11-15; Admin. Rec. #41 (Letter from Thomas S. Waldo, Earthjustice, et al., to Hanh Gold, U.S. EPA Region 10 (May 14, 2003)). In this regard, they cited the recently issued ASTF Study, which found reduced fertilization rates in three

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[13] Alaska regulations governing water quality standards allow the ADEC to authorize mixing zones in a discharge permit, state certification, or order, subject to specified conditions. *See* Alaska Admin. Code tit. 18, §§ 70.240-.270 (1999). A mixing zone is an area in a water body downstream of the discharge, where the effluent is diluted by the receiving water. Within the mixing zone, the TDS criteria can be exceeded, but outside of the mixing zone the criterion must be met. *See* Admin. Rec. #15 at 4.

[14] Due to freezing conditions, Red Dog Creek does not flow from mid-October through mid-May. Admin. Rec. #15 at 11. When break-up occurs in spring, Arctic grayling migrate upstream to spawn. *Id.* at 13.

species of salmon at TDS concentrations as low as 250 mg/l. Admin. Rec. #39 at 2-3; Admin. Rec. #41 at 1-3. KRPC specifically noted that the ASTF Study showed effects of TDS exposure at 250 mg/l on king salmon, which is also known as chinook salmon. Admin. Rec. #39 at 3. Another commenter, Earthjustice, stated as follows:

> [T]he ASTF study documents significant, negative impacts to fish at TDS levels much lower than those previously perceived as safe and, importantly, at levels below those proposed in the modified NPDES permit. * * * [The proposed modified permit] would allow discharges up to 500 [mg/l] in the Ikalukrok during times when Dolly Varden, chum, chinook, and sockeye salmon may spawn in the stream.

Admin. Rec. #41 at 1-2.

On June 25, 2003, the State of Alaska issued a final certification pursuant to section 401 of the CWA[15] that the conditions of the draft permit modification would assure compliance with Alaska's water quality standards. Admin. Rec. #51 (Letter, with attachments, from William D. McGee, Technical Engineer, Alaska Department of Environmental Conservation, to R.G. Scott, General Manager, Teck Cominco Alaska, Inc. (June 25, 2003)) (hereinafter "Alaska's Section 401 Certification"). Alaska's Section 401 Certification also identified conditions of the draft permit modification that could be made less stringent and still comply with Alaska's water quality standards. In particular, Alaska's Section 401 Certification stated that effluent discharges could be allowed during the arctic grayling spawning season if the in-stream TDS concentrations were limited to 500 mg/l. *Id.* at 2.

On July 17, 2003, the Region issued the final Permit Modification with the following TDS limits:

a. Mixing zones consistent with the mixing zones proposed in the draft permit modification. *Compare* Admin. Rec. #26 at 7-8 *with* Admin. Rec. #61 at 7 (Permit Condition I.A.8.a).

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[15] All NPDES permit applicants must obtain a certification from the appropriate state agency validating the permit's compliance with the pertinent federal and state water pollution control standards. CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1). The regulatory provisions pertaining to state certification provide that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates. 40 C.F.R. § 124.53(a). The regulations provide further that "when certification is required * * * no final permit shall be issued * * * [u]nless the final permit incorporates the requirements specified in the certification." 40 C.F.R. § 124.55(a).

b. No discharge until there is free flow of water in Mainstem of Red Dog Creek. Admin. Rec. #61 at 7 (Permit Condition I.A.8.b).

c. TDS limit of 500 mg/l outside of the mixing zone in the Mainstem of Red Dog Creek until arctic grayling have finished spawning in the Mainstem of Red Dog Creek. *Id.* at 7-8 (Permit Condition I.A.8.c).

d. After arctic grayling have finished spawning, TDS concentrations at or below 1,500 mg/l at the edge of the mixing zone in Red Dog Creek until the end of the discharge season, 1,000 mg/l at the edge of the mixing zone in Ikalukrok Creek until the end of the discharge season, and 500 mg/l at Station 160 in Ikalukrok Creek starting on July 25 through the end of the discharge season. *Id.* at 8 (Permit Condition I.A.8.e).

The Permit Modification's condition allowing discharges during the arctic grayling spawning season, which limits TDS concentrations in Red Dog Creek to 500 mg/l, is a change from the limits proposed in the draft permit modification that was noticed for public comment, which would have prohibited all discharges during arctic grayling spawning. *Compare* Admin. Rec. #26 at 7-8 *with* Admin. Rec. #61 at 7-8.

On August 17, 2003, KRPC filed its Petition requesting that the Board grant review of the Region's decision to issue the Permit Modification. The Region filed a response to the Petition on October 15, 2002. *See* Region 10 Response to Petition for Review ("Region's Response"). On November 19, 2003, Teck Cominco also filed a response to the Petition that "incorporates by reference" the Region's arguments against granting review of the Permit Modification and provided Teck Cominco's additional reasons for denying review. *See* Teck Cominco Alaska's Response to Petition for Review (Nov. 19, 2003) ("Teck Cominco's Response").

On February 20, 2004, KRPC filed a reply to the Region's Response to KRPC's Petition (hereinafter "KRPC's Reply") along with a motion seeking leave to reply. On March 10, 2004, the Region filed a response to KRPC's motion, and on March 16, 2004, Teck Cominco filed a response the KRPC's motion. Both the Region and Teck Cominco request that we deny KRPC's motion for leave to file a reply. We have determined to grant KRPC's motion and accept its Reply in this matter. While we generally discourage the filing of additional briefing after the permit issuer's response, we do have the discretion to consider additional briefing when appropriate. U.S. EPA Envtl. Appeals Bd., *The Environmental Appeals Board Practice Manual* 36 (Sept. 2002).[16] Here, we find KRPC's Reply instruc-

[16] The Environmental Appeals Board Practice Manual may be obtained at http://www.epa.gov/eab/pmanual.pdf (viewed May 27, 2004).

tive regarding the issues on appeal, and we note that this additional briefing has not delayed our decision in this matter.[17] We do not find that KRPC has attempted to use its Reply to expand the arguments initially set forth in its Petition; rather the Reply at most presents a somewhat more precise articulation of those arguments.[18]

III. *DISCUSSION*

A. *Standard of Review*

The Board will generally not grant review of petitions filed under 40 C.F.R. § 124.19(a), unless it appears from the petition that the permit condition at issue is based on a clearly erroneous finding of fact or conclusion of law or involves an important policy consideration that the Board, in its discretion, should review. 40 C.F.R. § 124.19(a) (2003); *see also In re Gov't of D.C., Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 332-33 (EAB 2002) (hereinafter "*D.C. MS4*"); *In re City of Moscow, Idaho*, 10 E.A.D. 135, 140-41 (EAB 2001) (hereinafter "Moscow"); *In re City of Irving, Tex. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 111, 122 (EAB 2001) (hereinafter "*Irving MS4*"). While the Board has broad power to review decisions under section 124.19, the Agency intended this power to be exercised "only sparingly." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); *see also D.C. MS4*, 10 E.A.D. at 333; *Moscow*, 10 E.A.D. at 141; *In re Rohm & Haas Co.*, 9 E.A.D. 499, 504 (EAB 2000).

Agency policy favors final adjudication of most permits at the Regional level. 45 Fed. Reg. at 33,412; *see also D.C. MS4*, 10 E.A.D. at 333; *Moscow*, 10 E.A.D. at 141; *Irving MS4*, 10 E.A.D. at 122; *In re New England Plating Co.*, 9 E.A.D. 726, 730 (EAB 2001). On appeal to the Board, the petitioner bears the burden of demonstrating that review is warranted. *D.C. MS4*, E.A.D. at 333; *see also Moscow*, 10 E.A.D. at 141; *In re Haw. Elec. Light Co.*, 8 E.A.D. 66, 71-72 (EAB 1998). We have explained that in order to establish that review of a permit is warranted, section 124.19(a) requires that a petitioner both state the objections to the permit that are being raised for review and explain why the permit decisionmaker's previous response to those objections (i.e., the decisionmaker's basis

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[17] We reject the Region's suggestion that KRPC filed its Reply unduly late. Region's Response to KRPC's Motion for Leave to File a Reply at 3 (Mar. 9, 2004). The Region acknowledges that KRPC had some difficulty obtaining full access to all documents in the record. It appears that KRPC requested access to additional documents shortly after the Region filed its Response and, after agreeing to provide the documents "immediately," "due to an administrative oversight the Region provided them in response to KRPC's follow-up request two months later." *Id.*

[18] Indeed, in opposing KRPC's motion seeking leave to file a reply, Teck Cominco states that the Reply "offers no new facts, no new arguments." Teck Cominco's Opposition to KRPC's Motion for Leave to File a Reply at 3 (Mar. 8, 2004).

for the decision) is clearly erroneous or otherwise warrants review. *See In re South Shore Power, LLC*, PSD Appeal No. 03-02, slip op at 10 (EAB June 4, 2003); *In re Caribe Gen. Elec. Prods.*, 8 E.A.D. 696, 710 (EAB 2000).

The Board traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature. *Moscow*, 10 E.A.D. at 142; *see also In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 667 (EAB 2001). When the Board is presented with technical issues, we look to determine whether the record demonstrates that the Region duly considered the issues raised in the comments and whether the approach ultimately adopted by the Region is rational in light of all the information in the record. *D.C. MS4*, 10 E.A.D. at 334. The Region's rationale for its conclusions, however, must be adequately explained and supported in the record. *Id.* at 342-43 ("Without an articulation by the permit writer of his [or her] analysis, we cannot properly perform any review whatsoever of that analysis and, therefore, cannot conclude that it meets the requirement of rationality.").

In the present matter, KRPC identifies four grounds for its request that we review the Region's decision to issue the Permit Modification. KRPC argues that: (1) the Region's decision to issue the Permit Modification with a less stringent, in-stream TDS limit of 500 mg/l applicable during salmon spawning is not supported by the evidence in the record; (2) the Region erred in concluding that it has authority under 40 C.F.R. § 122.62 to issue the Permit Modification; (3) the Permit Modification violates 33 U.S.C. § 1342(o) because it contains less stringent effluent limits than the limits in the Permit previously issued to Teck Cominco for the Red Dog Mine; and (4) the Permit Modification's TDS limits applicable to Red Dog Creek during arctic grayling spawning and to Ikalukrok Creek during salmon spawning violate Alaska's antidegradation regulations and 40 C.F.R. § 122.4. *See* Petition. We will discuss each of these arguments in the following parts of this decision. Because KRPC's second argument raises the question whether a predicate condition required by the regulations for permit modification has been satisfied in the present case, we will consider this argument first in the following Part III.B. We also note at the outset that KRPC's first, third and fourth arguments are all variations of its central contention that the Region's decision does not ensure the protection of arctic grayling and king salmon spawning. Accordingly, we will consider these arguments together in Part III.C below.

B. *Whether the Region Properly Found that the Prerequisites for Permit Modification Under 40 C.F.R. § 122.62 Have Been Satisfied in this Case*

KRPC argues that the Region's decision to issue the Permit Modification pursuant to 40 C.F.R. § 122.62(a) is a clear error of law. KRPC notes that, pursuant to this regulation, modification based on an amended water quality standard is allowed where the "permittee requests modification in accordance with § 124.5

within ninety (90) days after Federal Register notice of the action on which the request is based." Petition at 2. KRPC argues that this condition has not been satisfied in the present case because the Region has not published in the Federal Register notice of its approval of either Alaska's amended statewide water quality standard for TDS or Alaska's site-specific water quality standard. *Id.* KRPC thus argues that "[t]he Permit Modification does not comply with 40 C.F.R. § 122.62(a) because the permittee, Teck Cominco, did not request modification in accordance with § 124.5 within 90 days after Federal Register notice of the action on which the request is based * * * ." *Id.* at 1.

KRPC is correct that a permit may be modified only when specifically authorized by the regulations. A permit may be modified during its term only if the modification is authorized by either section 122.62, governing modifications generally, or section 122.63, governing minor modification. 40 C.F.R. § 122.62 ("If cause does not exist under this section or § 122.63, the Director shall not modify or revoke and reissue the permit."). Section 122.62(a)(3)(i) authorizes a permit to be modified under the following conditions:

> (A) The permit condition requested to be modified was based on a promulgated effluent limitation guideline, EPA approved or promulgated water quality standards, or the Secondary Treatment Regulations; and
>
> (B) EPA has revised, withdrawn, or modified that portion of the regulation or effluent limitation guideline on which the permit condition was based, or has approved a State action with regard to a water quality standards on which the permit condition was based; and
>
> (C) A permittee requests modification in accordance with § 124.5[19] within ninety (90) days after Federal Register notice of the action on which the request is based.

40 C.F.R. § 122.62(a)(3)(i).

In explaining the basis for the proposed permit modification in the Fact Sheet, the Region stated that the modification is authorized under 40 C.F.R.§ 122.62(a)(3) due to the amended statewide TDS criteria and the pro-

[19] The general requirements regarding modification, revocation, reissuance, or termination of EPA-issued permits are set forth in 40 C.F.R. § 124.5.

posed site-specific criterion. Admin. Rec. #26 at 4.[20] During the public comment period, another commenter, Earthjustice, argued that the permit could not be modified under section 122.62(a)(3)(i) until after publication in the Federal Register of the amended statewide and site-specific criteria. Admin. Rec. #41 at 4 (Letter from Thomas S. Waldo, Earthjustice, to Hanh Gold, U.S. EPA Region 10 (May 14, 2003)). The Region responded to Earthjustice's comments regarding compliance with section 122.62(a)(3)(i) by stating as follows:

> EPA approval/disapproval of state water quality standards is not required to be published in the Federal Register. Therefore, the requirement that the 'permittee requested modification * * * within ninety (90) days after Federal Register notice of the action on which the request is based' is not applicable to this action.

Admin. Rec. #62 at 7.

In its Petition, KRPC acknowledges that the prerequisites for modification set forth in subsections (A) and (B) of section 122.62(a)(3)(i) have been satisfied in this case because the Permit Modification changes limitations based on the statewide TDS criterion adopted by the State of Alaska in 1999 and approved by EPA in April 2002, and on the site-specific criterion for TDS of 1,500 mg/l for the Mainstem of Red Dog Creek after the arctic grayling spawning season that EPA approved on July 16, 2003. Petition at 3. However, KRPC argues that the

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[20] The Region also stated in the Fact Sheet that modification is authorized where the state certification under CWA § 401 is amended, and the Region explained that Alaska was in the process of issuing an amended section 401 certification for the Red Dog Mine. Admin. Rec. #26 at 4. In its response to the Petition, the Region argues that Alaska's amended section 401 certification serves as an alternative ground for permit modification under section 122.62(a)(3)(iii). Region's Responseat 15. We reject this contention. Section 122.62(a)(3)(iii) allows a permit to be modified "for changes based on modified State certifications of NPDES permits, see § 124.55(b)." However, section 124.55(b) provides that:

> If there is a change in the State law or regulation upon which a certification is based, * * * a State which has issued a certification * * * may issue a modified certification * * * and forward it to EPA * * * . If the certification * * * is received after final agency action on the permit, the Regional Administrator may modify the permit on request of the permittee *only to the extent necessary to delete any conditions based on a condition in a certification invalidated by a court of competent jurisdiction or by an appropriate State board or agency*.

40 C.F.R. § 124.55(b) (emphasis added). The Region has not demonstrated that the Permit Modification at issue in this case would modify the permit's conditions "only to the extent necessary to delete any conditions" imposed based on the prior section 401 certification that has been invalidated by a court or appropriate state board or agency. Accordingly, section 122.62(a)(3)(iii) cannot be looked to as providing authorization for the modification.

Region failed to comply with subsection (C) because the Region's approval of Alaska's amended statewide and site-specific criteria have not been published in the Federal Register. *Id.*

Upon consideration, we conclude that KRPC has not shown that the Region's response to comments on this point was clearly erroneous or otherwise warrants review. Although section 122.62(a)(3)(i) is not a model of clarity, the better reading of the regulation is that subparagraph (C) merely establishes a deadline after which a permittee may not request a modification for those classes of actions required by some other provision of the regulations to be published in the Federal Register; it does not establish both such a deadline and a limitation to submission of the request in circumstances where there is no Federal Register publication as argued by KRPC.

Notably, a request for modification under section 122.62(a)(3)(i) must be based on one of the listed Agency actions, some of which require Federal Register publication to be effective, while others do not. In particular, Agency revision, withdrawal, or modification of an effluent limitation guideline or a Secondary Treatment Regulation must be published in the Federal Register to be valid. 33 U.S.C. § 1314(b), (d)(1), (c)(4). In contrast, Agency approval of a state action with regard to a water quality standard does not require Federal Register publication. *See* 40 C.F.R. § 131.21. Thus, KRPC's interpretation that section 122.62(a)(3)(i) requires Federal Register publication as a condition precedent to permit modification would produce the anomalous result that Agency approval of an amended state water quality standard would be immediately valid and effective without Federal Register publication for all purposes *except* a permittee's request for permit modification under section 122.62(a)(3)(i). This would create an excessively complex and burdensome, bifurcated process that would require the Agency, when approving amended state water quality standards, to decide whether to proceed with an otherwise unnecessary Federal Register publication solely in case a permittee might subsequently seek a permit modification. KRPC's interpretation would have the consequence of effectively barring requests for permit modification if the Agency failed to anticipate the permittee's need for a permit modification. We see nothing in the text of the regulation, or its history, that suggests the Agency intended this effect; nor do we see any public policy consideration that would be served by this interpretation.

To the contrary, the regulatory history suggests that the Agency only intended section 122.62(a)(3)(i)(C) to function as a time limit or deadline by which a permittee must seek modification for those classes of actions required by some other provision of the regulations to be published in the Federal Register. When the Agency originally proposed the regulatory text that has become section 122.62(a)(3)(i), the proposal would only have allowed permit modification in the event of changes to EPA-promulgated effluent guidelines, which the CWA, as noted above, requires to be published in the Federal Register. 43 Fed. Reg.

37,078, 37,098 (Aug. 21, 1978). However, after taking public comment on the proposed regulation, the Agency noted that "[s]everal commenters suggested that withdrawal or revision of Water Quality Standards * * * should also constitute cause for permit modification. EPA agrees with these commenters and has revised [section 122.62] accordingly." 44 Fed. Reg. 32,854, 32,869 (June 7, 1979). This history contains no suggestion that the Agency intended the inclusion of amendments to water quality standards as a basis for modification under section 122.62 to operate as imposing a requirement that Agency approval of changes to state water quality standards be published in the Federal Register. Accordingly, we find no clear error in the Region's response to comments rejecting the argument that Federal Register publication is required before a permit may be modified under section 122.62(a)(3)(i) when the underlying Agency approval of a state action does not otherwise require Federal Register publication.

C. *The ASTF Study and Whether the Permit Modification Ensures Compliance with Water Quality Standards*

1. *Background*

KRPC raises several arguments premised on the ASTF Study that, at bottom, contend the Region erred in concluding that the Permit Modification will ensure compliance with Alaska's water quality standards. As noted above in our summary of the statutory and regulatory background, section 301 of the CWA requires, among other things, that NPDES permits contain "any more stringent limitation, including those necessary to meet water quality standards * * * established pursuant to any State law or regulation * * * ." 33 U.S.C. § 1311(b)(1)(C). This statutory requirement has been implemented, in part, through long-standing regulations that prohibit the issuance of an NPDES permit "when imposition of conditions cannot *ensure* compliance with the applicable water quality requirements of all affected states." 40 C.F.R. § 122.4(d) (emphasis added.). The regulations also require that "the permit must contain effluent limits" for a particular pollutant "[w]hen the permitting authority determines * * * that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard." 40 C.F.R. § 122.44(d)(1)(iii). We have held that a permit issuer's analysis concluding that the permit's conditions will ensure compliance with state water quality standards must be articulated with sufficient clarity for the Board to review and must be supported by evidence in the administrative record. *D.C. MS4*, 10 E.A.D. at 342-43.

In the present case, KRPC argues, in large measure based on the ASTF Study, that the Region's decision to issue the Permit Modification fails to satisfy these requirements. First, KRPC argues that the new, less stringent in-stream TDS limit of 500 mg/l during salmon spawning season is not supported by the evidence in the Record. Petition at 1. More specifically, KRPC argues that "there is no

factual basis in the record to support Region 10's decision that raising the TDS permit limits will not harm fish, specifically the king salmon," KRPC's Reply at 2, and further that the ASTF Study shows that TDS will in fact impair salmon spawning. Petition at 1. We note that KRPC appears to raise this first argument solely as a challenge to the limitation applicable to the salmon spawning season after July 25 each year. KRPC does not mention arctic grayling spawning or Red Dog Creek in the first argument of either its Petition or Reply. Petition at 1; KRPC's Reply at 2-7.

Second, KRPC refers to the ASTF Study in arguing that the Permit Modification violates 40 C.F.R. § 122.4 because the less stringent TDS limits in the Permit Modification violate Alaska's antidegradation rule. Petition at 3-5; KRPC's Reply at 14-23. KRPC raises this antidegradation argument with respect to both the limit applicable to the arctic grayling spawning season in Red Dog Creek and the limit applicable to the salmon spawning in Ikalukrok Creek after July 25 of each year. Petition at 3-5 (referencing both salmon spawning in Ikalukrok Creek and arctic grayling spawning in Red Dog Creek).

KRPC also raises a third argument that, in the context of this case, is similar to KRPC's contention that the Permit Modification does not ensure compliance with Alaska's antidegradation rule: KRPC argues that the less stringent TDS limits in the Permit Modification violate the "antibacksliding" prohibition in 33 U.S.C. § 1342(o), which restricts when a permit renewal or modification may contain less stringent limits. Petition at 3; KRPC's Reply at 13-14, 19-21.

Both the Region and Teck Cominco argue that KRPC's Petition should be dismissed. The Region argues that KRPC has failed to show that the question of compliance with Alaska's antidegradation rule was raised during the public comment period and that this issue, therefore, has not been preserved for appeal. Region's Response at 21-23. The Region and Teck Cominco also argue that KRPC has failed to show that the Region's responses to the comments raised during the public comment period were clearly erroneous or that the Region otherwise committed clear error in its decision. In particular, with respect to the TDS limit applicable to Ikalukrok Creek during salmon spawning, the Region and Teck Cominco argue that the Permit Modification's limit is based on the numeric criteria in Alaska's Water Quality Standards and on Alaska's Section 401 Certification, both of which they contend may not be challenged in this proceeding. Region's Response at 11-12, 23; Teck Cominco's Response at 5-10. Although the Region does not raise compliance with Alaska's numeric criteria as a reason for denying review of the TDS limit applicable to Red Dog Creek during arctic grayling spawning, Teck Cominco does. Teck Cominco's Response at 5-7. Both the Region and Teck Cominco argue that review of the TDS limit applicable to Red Dog Creek during arctic grayling spawning should be denied due to Alaska's Section 401 Certification, although they articulate their reasons differently. Region's Response at 23; Teck Cominco's Response at 7-10.

Because one of the threshold requirements applicable to all petitions for review of a permit is proper preservation of issues in the proceedings below, we first consider in the following Part III.C.2 the Region's argument regarding whether Alaska's antidegradation rule was raised during the public comment period or otherwise properly preserved for review. Since we conclude that the antidegradation issue was properly preserved for review with respect to the TDS limit applicable during arctic grayling spawning, we next consider, in Part III.C.3, whether the in-stream 500 mg/l TDS limit applicable to Red Dog Creek during arctic grayling spawning (Permit Condition I.A.8.c) ensures compliance with Alaska's water quality standards. Next, because we conclude with respect to the TDS limit applicable to Ikalukrok Creek during salmon spawning after July 25 of each year (Permit Condition I.A.8.e.3) that the antidegradation issue was not properly preserved for review, in Part III.C.4 we consider the other issue raised by KRPC with respect to this condition that this less-stringent TDS limit is not supported by the evidence in the record. Finally, in Part III.C.5, we briefly address KRPC's "antibacksliding" arguments under 33 U.S.C. § 1342(o).

2. *Preservation of Issues for Appeal*

The Region contends that concerns regarding compliance with Alaska's antidegradation rule were not raised during the public comment period and, therefore, have not been preserved for review. Region's Response at 21. The Region states that "KRPC failed to demonstrate that this issue was raised during the public comment period," observing that neither KRPC nor any other commenter made explicit reference to Alaska's antidegradation regulation "during the comment period * * * , depriving the Region of the opportunity to address this issue in the first instance prior to this appeal." *Id.* (citing 40 C.F.R. § 124.19(a)).

As we have frequently explained, persons seeking review of permitting decision under 40 C.F.R. part 124 must demonstrate "that any issues being raised were raised during the public comment period to the extent required by these regulations * * * ." *In re City of Moscow*, 10 E.A.D. 135, 141 (EAB 2001) (citing 40 C.F.R. § 124.19(a)). "Participation during the comment period must conform with the requirements of section 124.13, which requires that all reasonably ascertainable issues and all reasonably available arguments supporting a petitioner's position be raised by the close of the public comment period." *Id.* We have explained, "[t]he effective, efficient and predictable administration of the permitting process demands that the permit issuer be given the opportunity to address potential problems with draft permits before they become final." *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 249-50 (EAB 1999). "In this manner, the permit issuer can make timely and appropriate adjustments to the permit determination, or, if no adjustments are made, the permit issuer can include an explanation of why none are necessary." *In re Essex County (N.J.) Res. Recovery Facility*, 5 E.A.D. 218, 224 (EAB 1994).

However, we have also consistently recognized that issues pertaining to changes from the draft to final permit decision may be raised for the first time on appeal. *In re Rockgen Energy Ctr.*, 8 E.A.D. 536, 540 (EAB 1999) ("Any issues not previously raised may not be raised on appeal except to the extent that these issues were not reasonably ascertainable or concern changes from the draft to the final permit decision."); *In re Jett Black, Inc.*, 8 E.A.D. 353, 358 (EAB 1999); *In re Envtl. Disposal Sys., Inc.*, 8 E.A.D. 23, 30 n.7 (EAB 1998). This exception flows directly from the regulatory text allowing persons who did not participate in the public comment period to petition for review "to the extent of the changes from the draft to the final permit decision." 40 C.F.R. § 124.19(a); *see also In re Am. Soda, LLP*, 9 E.A.D. 280, 288 (EAB 2000).

In the present case, the Permit Modification's condition limiting discharges during arctic grayling spawning (Permit Condition I.A.8.c) is a change from what was proposed in the draft permit modification. Specifically, the draft permit modification would not have allowed any effluent discharges during the arctic grayling spawning season. Admin. Rec. #26 at 8 ("Effluent cannot be discharged until after the arctic grayling have completed spawning in Mainstem Red Dog Creek (spring)."). In contrast, the final Permit Modification allows discharges subject to the in-stream TDS limit of 500 mg/l in the Mainstem of Red Dog Creek "until arctic grayling have finished spawning." Admin. Rec. #61 at 7-8. Because the in-stream 500 mg/l TDS limit for the Mainstem of Red Dog Creek during spawning season is a change in the final Permit Modification from the draft, KRPC was not required to raise issues regarding that limit during the public comment period on the draft permit modification, *Rockgen*, 8 E.A.D. at 540; *Jett Black*, 8 E.A.D. at 358; *Envtl. Disposal Sys.*, 8 E.A.D. at 30 n.7, and KRPC is not precluded from raising for the first time on appeal its antidegradation arguments with respect to the 500 mg/l limit that is applicable during arctic grayling spawning.

KRPC also argues that another permit condition — the in-stream TDS limit of 500 mg/l in Ikalukrok Creek during king salmon spawning after July 25 each year (Permit Condition I.A.8.e.3) — violates Alaska's antidegradation rule. This condition of the Permit Modification was not changed between the draft and the final. *Compare* Admin. Rec. #26 at 4-5, 8 *with* Admin. Rec. #61 at 8. Accordingly, all reasonably ascertainable issues and reasonably ascertainable arguments regarding this condition were required to be raised during the public comment period. *Moscow*, 10 E.A.D. at 141. KRPC, however, has not demonstrated that any public comment identified Alaska's antidegradation regulation as necessitating a more stringent TDS limit applicable to Ikalukrok Creek during salmon spawning.

In particular, KRPC has not shown that its own comments, or any of the other public comments, made reference to "antidegradation," or any other term of art such as "existing use," or even so much as cited Alaska's antidegradation regulation, Alaska Admin. Code tit. 18, § 70.015 (1999). The question whether king

salmon spawning is an existing use of Ikalukrok Creek and, more importantly, evidence and argument pertaining to that question, are raised by KRPC for the first time on appeal in its Reply. *See* KRPC's Reply at 6 (citing evidence that "Chinook (king) salmon used the Ikalukrok Creek for spawning before the mine opened"); *id.* at 14-15 (arguing that king salmon have "historically spawned in Ikalukrok Creek").

We specifically reject KRPC's contention that "Earthjustice raised the Alaska antidegradation provision, Alaska Admin. Code tit. 18, § 70.020 (1999), and it also cited the overriding federal requirements under 40 C.F.R. §§ 122.4(a) and 122.4(d)." KRPC's Reply at 16 (citing Admin. Rec. #41 at 2). KRPC is certainly correct that Earthjustice's written public comments made reference to Alaska Admin. Code tit. 18, § 70.020 (1999), Admin. Rec. #41 at 2, but that section contains Alaska's water quality "criteria," not Alaska's antidegradation regulation, which is set forth in Alaska Admin. Code tit. 18, § 70.015 (1999). Earthjustice's comments also did not use the word "antidegradation" or the phrase "existing use."

Earthjustice's reference to the requirement set forth in 40 C.F.R. § 122.4(a) and (d) that permit conditions must ensure compliance with state water quality standards also was not sufficient to draw the Region's attention to any concern regarding antidegradation. Instead, Earthjustice's reference to 40 C.F.R. § 122.4(a) and (d) was part of a discussion of Alaska's water quality "criteria." As we noted above in Part II.B.2, water quality "criteria" and the antidegradation policy are two separate components of state water quality standards. Accordingly, Earthjustice's citation to 40 C.F.R. § 122.4(a) and (d) as part of its discussion of Alaska's water quality "criteria" set forth in Alaska Admin. Code tit. 18, § 70.020 (1999), did not serve to alert the Region to any concern regarding the separate "antidegradation" component of Alaska's water quality standards.

As we have explained,"[t]he effective, efficient and predictable administration of the permitting process demands that the permit issuer be given the opportunity to address potential problems with draft permits before they become final." *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 (EAB 1999). Issues raised during the public comment period must be "raised with a reasonable degree of certainty," which serves to ensure "that while the permit issuer will be held accountable for a full and meaningful response to comments, [the permit issuer] need not guess the meaning behind imprecise comments." *In re Westborough*, 10 E.A.D. 297, 304 (EAB 2000). Moreover, "the Region is under no obligation to speculate about possible concerns that were not articulated in the comments * * * ." *In re New England Plating Co.*, 9 E.A.D. 726, 735 (EAB 2001). In the present case, Earthjustice's comments were not imprecise — to the contrary, Earthjustice expressly discussed Alaska's water quality "criteria." The Region was not required to speculate that such concerns expressly discussing water quality "criteria" might later be identified on appeal as grounds for review of "an-

tidegradation" issues.[21]

Accordingly, we deny review of whether the Permit Modification's condition governing the TDS limit applicable to Ikalukrok Creek during salmon spawning after July 25 of each year (Permit Condition I.A.8.e.3) complies with Alaska's antidegradation regulation.

3. *Condition Governing In-stream TDS Concentrations in Red Dog Creek During Arctic Grayling Spawning (Permit Condition I.A.8.c)*

The Permit Modification conditions the Mine's discharges during arctic grayling spawning based on an in-stream TDS limit of 500 mg/l applicable in the Mainstem of Red Dog Creek. Admin. Rec. #61 at 7-8 (Permit Condition I.A.8.c). As part of the Petition's fourth issue, KRPC requests that we grant review of this condition on the grounds that this limit does not ensure compliance with Alaska's antidegradation rule. Petition at 4 (the Region "also must ensure that the permit complies with the State antidegradation regulations"). KRPC contends that the Region acknowledged that the ASTF Study shows that TDS of a composition similar to that present in the Red Dog Mine effluent impacts fertilization success in some salmonid species, and that the Region has submitted an Information Request to Teck Cominco that requires tests to be performed to determine the effects of TDS on the spawning success of arctic grayling, which results "'will be used to determine whether a more stringent criterion is necessary to protect spawning arctic grayling.'" *Id.* at 4-5 (quoting Admin. Rec. #60 (Letter from Randall F. Smith, Director Office of Water, U.S. EPA Region 10, to Ernesta Ballard, Commissioner, ADEC (July 16, 2003)). KRPC argues that this "approach represents a failure by [the Region] to ensure that all existing uses of Red Dog Creek are pro-

[21] Our prior decisions have noted that there are "limited circumstances [in which] this Board has considered the merits of an issue not specifically raised in comments below where the specific issue raised in the petition is very closely related to challenges raised during the comment period, and the Region had the opportunity to address the concerns in its response to comments." *New England Plating*, 9 E.A.D. at 732-33 (citing *In re EcoEléctrica, L.P.*, 7 E.A.D. 56, 64 n.9 (EAB 1997)); *In re P.R. Elec. Power Auth.*, 6 E.A.D. 253, 257 n.5 (EAB 1995)). "This doctrine, however, has been rarely applied," *New England Plating*, 9 E.A.D. at 733, and generally in circumstances where, unlike here, the Region had actually addressed the concerns in its response to comments. We conclude that it would not be appropriate to apply this "closely related" doctrine in the present case. Although the issues raised in the public comments regarding whether the ASTF Study demonstrates that king salmon spawning is impaired by TDS concentrations as low as 250 mg/l may speak to one of the technical determinations required by the antidegradation rule, those comments do not speak to the predicate question whether king salmon spawning is an "existing use" of Ikalukrok Creek. Because neither this particular technical issue nor the governing legal standard articulated in the antidegradation rule were specifically raised during the public comment period, we cannot find that the issues on appeal are closely related to the scientific and technical issues identified during the public comment period.

tected." *Id.* at 5. KRPC argues that the Region "must ensure that the existing use, spawning arctic grayling, is protected before it approves the permit modification." *Id.*

The Region and Teck Cominco argue that the Board should reject KRPC's Petition on the grounds that the Petition does not show clear error in the Region's permitting decision. Teck Cominco argues that "the statewide 500 mg/l limit in the Red Dog Creek during arctic grayling spawning * * * [is a] promulgated state water quality standard[]," Teck Cominco's Response at 5, and that "KRPC's complaint as to a permit condition based on EPA approved state water quality standards challenges a 'predicate and earlier reviewable regulatory decision' that is ordinarily not reviewable in this forum," *id.* at 7 (quoting *In re Echevarria*, 5 E.A.D. 626, 635 n.13 (EAB 1997)). In addition, both Teck Cominco and the Region argue that review should be denied because Alaska has certified that the Permit Modification complies with Alaska's water quality standards, although they articulate their reasons differently. Region's Response at 23; Teck Cominco's Response at 7-10. The Region also argues that KRPC has not demonstrated that the Region committed clear error in its decision. Region's Response at 23. Each of these arguments are discussed below.

a. *Teck Cominco's Argument that a Permit Limit Based on State Water Quality "Criteria" Is Not Reviewable*

Teck Cominco argues that "the statewide 500 mg/l limit in the Red Dog Creek during Arctic Grayling spawning * * * [is a] promulgated state water quality standard[]," Teck Cominco's Response at 5, and that "KRPC's complaint as to a permit condition based on EPA approved state water quality standards challenges a 'predicate and earlier reviewable regulatory decision' that is ordinarily not reviewable in this forum," *id.* at 7 (quoting *In re Echevarria*, 5 E.A.D. 626, 635 n.13 (EAB 1997)). Teck Cominco notes that we have denied petitions for review of NPDES permits where the petition sought to challenge EPA approved state water quality standards. *Id.* at 6 (citing *In re City of Moscow, Idaho*, 10 E.A.D. 135, 158-61 (EAB 2001); *In re City of Hollywood, Fla.*, 5 E.A.D. 157, 175-76 (EAB 1994)).

As we will explain in this subpart, Teck Cominco's argument that Alaska's statewide 500 mg/l numeric criterion precludes KRPC's request for review of the Permit Modification's 500 mg/l limit applicable in Red Dog Creek during arctic grayling spawning is misplaced because KRPC has grounded its request for review of this limit on Alaska's antidegradation rule, not on Alaska's numeric criteria. Although the Region raises a similar argument (grounded on the prior Agency approval of Alaska's water quality criteria) with respect to KRPC's request for review of the permit limit applicable to salmon spawning in Ikalukrok Creek, the Region apparently recognized that KRPC's challenge to the arctic grayling spawning limit is based solely on Alaska's antidegradation rule and that compli-

ance with Alaska's numeric criteria does not preclude a challenge based on the antidegradation rule.[22]

Teck Cominco is correct that KRPC cannot use this forum to argue that Alaska's water quality standards, or more specifically Alaska's numeric water quality criteria, are inadequate or somehow flawed. Specifically, we have "denied in the context of NPDES permit appeals review of challenges to EPA's approval of state water quality standards." *In re City of Moscow, Idaho*, 10 E.A.D. at 161 (citing *In re City of Hollywood*, 5 E.A.D. 157, 175-76 (EAB 1994)). In *City of Hollywood*, we rejected the petitioner's argument that the permit condition at issue should have been deleted from the permit on the grounds that EPA had allegedly erred in approving the water quality criterion on which the permit condition was based. *City of Hollywood*, 5 E.A.D. at 175-76. We explained as follows:

> [T]hreshold issues pertaining to whether the Agency may have erred in approving the standard in the first instance are necessarily beyond our jurisdiction. Our jurisdiction is limited to reviewing whether the Region, as permit issuer, included a condition in the permit that properly implements the standard.

Id. at 176. In other words, any challenge to the Region's permitting decision must focus on the decisions actually made in issuing the permit (i.e., the implementation of state standards), not on decisions made in prior predicate proceedings approving the state standards.

Teck Cominco argues that the 500 mg/l in-stream TDS limit during arctic grayling spawning is based on the EPA approved "statewide 500 mg/l limit" and, therefore, "KRPC's complaint as to a permit condition based on EPA approved state water quality standards" is precluded as an inappropriate challenge to the Agency's decision to approve that statewide standard. Teck Cominco's Response at 5. Teck Cominco's argument, however, must fail because Teck Cominco has misunderstood the distinction between Alaska's statewide numeric water quality

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[22] The Region explains as follows:

> In the fourth reason articulated in the Petition [regarding antidegradation] * * * , Petitioner has made a separate argument as to why it believes the existing state water quality standards required the Region, in view of the ASTF [Study], to impose a more stringent TDS limit in the Permit Modification. That [antidegradation] argument is addressed below. This first reason articulated in the Petition contains no such argument, however, and should be rejected as a basis for [the] Petition.

Region's Response at 12 n.7.

"criteria" and Alaska's "antidegradation" rule, both of which are part of Alaska's water quality standards.

As we noted in our summary of the statutory and regulatory background in Part II.B.2 above, state water quality standards have three components: (1) one or more "designated uses" for each water body or water body segment; (2) water quality "criteria;" and (3) an antidegradation policy. CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-.12. By referring to Alaska's "statewide 500 mg/l limit," Teck Cominco apparently means Alaska's statewide numeric water quality "criteria" for TDS, which is intended to protect "designated uses" of the relevant water bodies. *See* Admin. Rec. #6 at 9 (Alaska Admin. Code tit. 18, § 70.020 (1999)). As such, it is part of the second component of Alaska's state water quality standards. KRPC, however, does not argue that the Permit Modification's 500 mg/l in-stream TDS limit for the Mainstem of Red Dog Creek during arctic grayling spawning fails to properly implement Alaska's statewide water quality criteria. Instead, KRPC argues that this permit limit does not comply with the third component of Alaska's water quality standards, the antidegration rule found in Alaska Admin. Code tit. 18, § 70.015 (1999), Admin. Rec. #6 at 4.

Alaska's antidegradation rule, in accordance with the federal antidegradation rule, focuses on protecting "existing uses" by generally prohibiting degradation of water quality below that necessary to maintain existing uses.[23] As we noted in our summary of the statutory and regulatory background in Part II.B.2, each state's antidegradation policy must comply with the federal antidegradation policy promulgated at 40 C.F.R. § 131.12, which EPA has consistently described as the "absolute floor of water quality in all waters of the United States." Water Quality Standards Regulation, 48 Fed. Reg. 51,400, 51,403 (Nov. 8, 1983); *accord* Water Quality Standards Regulation (Advance Notice of Proposed Rulemaking), 63 Fed. Reg. 36,742, 36,781 (July 7, 1998). In short, the antidegradation rule is a separate and independent requirement that is not necessarily satisfied by proper implementation of the applicable state water quality criteria — indeed, by characterizing the antidegradation rule's focus on existing uses as the "absolute floor of water quality," the Agency clearly contemplated that circumstances would arise where the antidegradation rule's requirements require more stringent limits than would be required by the otherwise applicable water quality "criteria." The Agency's Office of Water discussed the significance of the antidegradation rule in a 1985 memorandum, which stated that "the antidegradation policy is an integral component of water quality standards and [] must be considered when developing * * * NPDES permits." Memorandum by Edwin L. Johnson, Director Office of Water Regulations and Standards, to Water Management Division Directors Regions I-X

[23] States must "develop and adopt a statewide antidegradation policy" that will, with limited exceptions, maintain and protect "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses * * * ." 40 C.F.R. § 131.12.

(1985).[24] This memorandum instructed that "All Agency staff involved in * * * permitting should be reminded that in developing * * * permits * * * consideration must, of course, be given to the States applicable water quality standards, including the antidegradation provisions." *Id.*

The regulatory prohibition against issuing a permit that does not ensure compliance with state water quality "standards" requires the Region to consider compliance with all components of the state's water quality standards, including compliance with the antidegradation rule, and not just compliance with the state's numeric water quality "criteria." *See* 40 C.F.R. § 122.4(d) (referring to compliance with water quality "standards," not "numeric criteria"). Thus, the fact that the Permit Modification's 500 mg/l in-stream TDS limit during arctic grayling spawning was based on the EPA-approved statewide water quality criterion does not preclude KRPC's argument that this limit does not ensure compliance with the third component of Alaska's water quality standards, the antidegradation rule.

b. *The Region's and Teck Cominco's Argument that Alaska's Section 401 Certification Precludes KRPC's Antidegradation Arguments*

Both Teck Cominco and the Region argue (although for different reasons) that review should be denied on the grounds that Alaska has certified that the Permit Modification complies with Alaska's water quality standards. *Compare* Region's Response at 23 *with* Teck Cominco's Response at 7-10. More specifically, the Region argues that it is not allowed to "impose a more stringent limitation than that certified as adequate by the State absent a showing of clear error in the State's certification." Region's Response at 23 (citing *In re Ina Road Water Pollution Control Facility*, 2 E.A.D. 99, 100-01 (CJO 1985)). As we explain in this subpart, the Region has articulated the correct standard, but we disagree with the Region's conclusion, holding instead that the record demonstrates clear error in Alaska's Section 401 Certification with respect to the TDS limit applicable during arctic grayling spawning.

In contrast, Teck Cominco articulates a different understanding of the effect of the Section 401 Certification in this case: Teck Cominco argues that the 500 mg/l in-stream TDS limit for Red Dog Creek during arctic grayling spawning is "attributable to state certification" within the meaning of 40 C.F.R. § 124.55(e) and that any review of conditions "attributable to state certification" must be made through applicable state procedures. Teck Cominco's Response at 7-8. Teck Cominco argues that we must dismiss this challenge "for lack of jurisdiction." *Id.*

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[24] This memorandum is available from EPA's internet website at the following URL: http://www.epa.gov/waterscience/library/wqstandards/antidegpermits.pdf (viewed May 27, 2004).

at 10. As we explain below, Teck Cominco misunderstands the meaning of the phrase "attributable to state certification."

Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency validating the permit's compliance with the pertinent federal and state water pollution control standards. *See* CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1). The regulatory provisions pertaining to state certification provide that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates. 40 C.F.R. § 124.53(a). The regulations further provide that "when certification is required * * * no final permit shall be issued * * * [u]nless the final permit incorporates the requirements specified in the certification under § 124.53(e)." 40 C.F.R. § 124.55(a). Section 124.53(e) provides that the State certification shall include "any conditions more stringent than those in the draft permit which the State finds necessary to" assure compliance with, among other things, state water quality standards, 40 C.F.R. § 124.53(e)(2), and shall include "[a] statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards," *id.* § 124.53(e)(3). Finally, "[r]eview and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through the procedures in this part." 40 C.F.R. § 124.55(e).

Teck Cominco's argument that we lack jurisdiction to review the Permit Modification's 500 mg/l limit during arctic grayling spawning is based on the assumption that the permit condition at issue is "attributable to State certification" and, therefore, pursuant to 40 C.F.R. § 124.55(e), may not be appealed under the part 124 procedures. However, Teck Cominco inexplicably fails to note our prior decisions explaining that the phrase "attributable to State certification" only applies to bar review where the state's certification requires more stringent conditions and does not bar review where the State certification indicates that state law would allow less stringent conditions. We have explained as follows:

> If the State's certification letter communicates the idea that a particular permit requirement is necessary to ensure compliance with a State water quality standard and cannot be made less stringent and still comply with the standard, the permit requirement is said to be "attributable to State certification." *In re General Electric Company, Hooksett, New Hampshire*, 4 E.A.D. 468, 471-472 (EAB 1993). A permit condition that is "attributable to State certification" may not be contested within the Agency. *See* 40 C.F.R. § 124.55(e) ("Review and appeals of limitations and conditions attributable to State certification shall be made

> through the applicable procedures of the State and may not be made through the procedures in this part.").
>
> If, on the other hand, the certification letter leaves open the possibility that the permit condition could be made less stringent and still comply with the State water quality standard, the permit condition is not "attributable to State certification" and is subject to further challenge within the Agency pursuant to the procedures in 40 C.F.R. part 124. *See In re Boise Cascade Corp.*, 4 E.A.D. 474, 483 n.7 (EAB 1993).

In re Gov't of D.C., Dep't of Public Works, 6 E.A.D. 470, 474 (EAB 1996). In essence, the regulations only bar review where the petitioner argues that the permit's conditions *should be less stringent*, but the state certified that the conditions *may not be made less stringent*.

The regulations do not prohibit us from considering a petitioner's argument that the permit's conditions *should be made more stringent*. "We have often emphasized that the Region's duty under section 401 of the CWA to defer to consideration of state law is intended to prevent EPA from *relaxing* any requirements, limitations or conditions imposed by state law." *Moscow*, 10 E.A.D. at 151 (citing *In re City of Jacksonville, Dist. II Wastewater Treatment Plant*, 4 E.A.D. 150, 157 (EAB 1992); *In re Ina Rd. Water Pollution Control Facility*, 2 E.A.D. 99, 100 (CJO 1985)). This distinction between the bar against relaxing requirements imposed by the state's certification on the one hand, and on the other hand the possibility of imposing more stringent requirements than those certified by the state is long-standing. Indeed, it was recognized by the Chief Judicial Officer in 1985 when he stated:

> It is well-settled that the Agency *cannot relax* effluent limitations certified by the State despite the fact that the Agency considers such limitations more stringent than necessary to satisfy the requirements of the Clean Water Act. * * *
>
> The question here is whether the Agency *can impose stricter* permit limits where a State has certified limits which the Agency considers too lax. Where a State commits clear error in its certification, for example, where a state overlooks applicable State water quality standards, the EPA General Counsel has concluded that the Agency can rectify the error by imposing effluent limitations that will meet the overlooked water quality standards, even if it means that the resulting limitations will be stricter than

> those certified by the State. * * * The Agency's authority to impose the stricter limitation in those instances rests on § 301(b)(1)(C) of the Act, which imposes a duty on the Agency to ensure that the permit contains "any more stringent limitations, including those necessary to meet water quality standards * * * established pursuant to any State law * * * ." This duty is independent of State certification under § 401.

Ina Rd. Water Pollution Control Facility, 2 E.A.D. at 100. More recently, we have also held that "when the Region reasonably believes that a state water quality standard requires a more stringent permit limitation than that specified by the state, the Region has an *independent duty* under section 301(b)(1)(C) of the CWA to include more stringent permit limitations." *Moscow*, 10 E.A.D. at 151 (emphasis added) (citing *City of Jacksonville*, 4 E.A.D. at 158).[25] Indeed, in *Moscow*, we rejected a state's characterization of its proposal for less stringent limits as "conditions" of its certification, and we concluded that the state's characterization does not transform such proposed less stringent limits into conditions attributable to state certification that must be implemented. *Id.* at 152 ("[T]he State's certification authority cannot limit the inclusion by the Region of any more stringent conditions required by section 301(b)(1)(C) of the CWA."). In the present case, KRPC argues that the Region erred because it failed to include a more stringent condition than the "less stringent" limit certified by Alaska.[26] Review under these circumstances is not barred by 40 C.F.R. § 124.55(e). Accordingly, we reject Teck Cominco's argument that we lack jurisdiction to consider KRPC's request for review of the 500 mg/l TDS limit for Red Dog Creek during arctic grayling spawning.

We do generally give substantial deference to the state's interpretation of its own laws. "[W]hen a State certification specifically prescribes a permit condition or limitation that interprets one of the State's water quality standards less strictly than the Region might prefer, * * * the Region would have to provide a compel-

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[25] In 1985, the Office of Water expressly recognized the Agency's independent duty to review states' section 401 certifications: "If the State issues a § 401 certification (for an EPA-issued NPDES permit) which fails to reflect the requirements of the antidegradation policy, EPA will, on its own initiative, add any additional or more stringent effluent limitations required to ensure compliance with [CWA] Section 301(b)(1)(C)." James M. Conlon, Acting Director, Office of Water Regulations and Standards, "Questions and Answers on Antidegradation," at 2 (1985) (answer to question number 5). This document is available from the EPA internet web page at the following URL: http://www.epa.gov/waterscience/library/wqstandards/antidegqa.pdf (viewed May 27, 2004).

[26] Indeed, Teck Cominco expressly recognizes that Alaska's statements in its Section 401 Certification "are clearly indications by ADEC of the extent to which the NPDES permit may be made *less stringent* without violating state water quality standards." Teck Cominco's Response at 9 (emphasis added).

ling reason for rejecting the State's interpretation of the standard." *In re Am. Cyanamid Co.*, 4 E.A.D. 790, 801 n.12 (EAB 1993); *see also Ina Rd. Water Pollution Control Facility*, 2 E.A.D. at 101 n.7 (the Agency may not simply substitute its interpretation for that of the State, but it may impose a more stringent limitation than certified by the State when the Agency bolsters its interpretation with a showing of "strong scientific or technological support"). Nevertheless, we have also held that the Region may not rely exclusively on the State certification to satisfy the Region's duty under 40 C.F.R. § 122.4(d) where there is a body of information in the record drawing the certification into question. *In re Gov't of D.C., Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342-43 (EAB 2002). In the present case, the Region argues that there is not a compelling reason to reject Alaska's statement in its certification that an in-stream TDS limit of 500 mg/l in the Mainstem of Red Dog Creek during arctic grayling spawning would ensure compliance with Alaska's water quality standards. We disagree.[27]

Alaska's conclusion that the condition in the draft permit modification prohibiting any discharge during arctic grayling spawning could be made less stringent is expressly based on the site-specific water quality standard for the Mainstem of Red Dog Creek. In particular, Alaska's Section 401 Certification states as follows:

> Part I.A.8. [of the draft permit modification] states that there shall be no discharge from Outfall 001 until after arctic grayling have finished spawning. DEC and the Alaska Department of Fish and Game have determined that when TDS concentrations in the Mainstem of Red Dog Creek remain at or below 500 mg/l, then arctic grayling spawning is successful. *That is reflected in the site-specific criteria recently adopted by ADEC and sent to EPA for their approval.* We request that this provision of the permit be omitted.

Admin. Rec. #51 at 2 (Letter from William D. McGee, ADEC technical engineer, to R.G. Scott, General Manager, Teck Cominco (June 25, 2003)) (emphasis added). Appendix A to Alaska's Section 401 Certification also explains that ADEC recently promulgated a site-specific criterion of 1,500 mg/l for TDS for the Mainstem of Red Dog Creek, "except during arctic grayling spawning in the Main Stem, *when the site-specific TDS criterion of 500 mg/l will apply*." *Id.* App. A at 2 (emphasis added).

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[27] This is not to suggest that an in-stream TDS limit of 500 mg/l in the Mainstem of Red Dog Creek necessarily fails to comply with Alaska's water quality standards. We conclude only that, on the record before us, it is unsupportable.

The Region, however, may not rely on this certification because on July 16, 2003, the Region declined to approve the 500 mg/l TDS site-specific criterion for the Mainstem of Red Dog Creek applicable during arctic grayling spawning. Admin. Rec. #60 at 1. Specifically, the Region explained that the recently issued ASTF Study"provides evidence that TDS of a composition similar to that present in the Red Dog Mine effluent has impacts on fertilization success in some salmonid species." *Id.* at 7. The Region stated that it would send a 308 Information Request to Teck Cominco requiring tests to be performed to determine the effects of TDS on the spawning success of arctic grayling with the goal of determining "whether a more stringent criteria is required to protect spawning arctic grayling" *Id.*[28] Thus, the 500 mg/l TDS site-specific criterion applicable during arctic grayling spawning, which Alaska relied upon in issuing its Section 401 Certification, has not been approved by the EPA as required by the CWA. CWA § 303(c)(1), 33 U.S.C. § 1313(c)(1); 40 C.F.R. § 131.5. In fact, it has been explicitly questioned by the Agency. This 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. *See D.C. MS4*, 10 E.A.D. at 342-343*; In re Am. Cyanamid Co.*, 4 E.A.D. 790, 801 n.12 (EAB 1993); *In re Ina Rd. Water Pollution Control Facility*, 2 E.A.D. 99, 100 (CJO 1985). Moreover, because the Section 401 Certification is contrary to the Region's own determination made on July 16, 2003, not to approve the site-specific criterion applicable during the arctic grayling spawning season, the Region would, in any event, have needed to provide some explanation beyond mere reliance on Alaska's certification.[29] Accordingly, we reject the Region's argument that there is no compelling reason to reject Alaska's Section 401 Certification conclusion that the 500 mg/l in-stream TDS limit for the Red Dog Creek during arctic grayling spawning will ensure compliance with Alaska's water quality standards.

c. *Remand of the TDS Limit Applicable During Arctic Grayling Spawning*

We now turn to the question whether KRPC has shown clear error in the Region's permitting decision with respect to the in-stream 500 mg/l TDS limit for the Mainstem of Red Dog Creek during arctic grayling spawning. Admin. Rec.

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[28] The Region also explained that its section 308 information request requires tests to determine the effects of TDS on the spawning success of Dolly Varden as well to determine whether a more stringent criteria is required to protect spawning Dolly Varden. Admin. Rec. #60 at 7.

[29] Under circumstances where the record contains a body of information drawing the state's certification in question, we have held that the permit issuer may not rely exclusively on the certification to satisfy the duty under 40 C.F.R. § 122.4(d). *D.C. MS4*, 10 E.A.D. at 343-43. Here, as we state below in notes 29 and 33, at a minimum, a further explanation is required.

#61 at 7-8. KRPC requests that we grant review of this condition on the grounds that the Region's "approach represents a failure by [the Region] to ensure that all existing uses of Red Dog Creek are protected." *Id.* at 5. KRPC contends that the Region acknowledged that the ASTF Study shows that TDS of a composition similar to that present in the Red Dog Mine effluent impacts fertilization success in some salmonid species, and that the Region has submitted an Information Request to Teck Cominco that requires tests to be performed to determine the effects of TDS on the spawning success of arctic grayling, which results "'will be used to determine whether a more stringent criterion is necessary to protect spawning arctic grayling.'" Petition at 4-5 (quoting Admin. Rec. #60 (Letter from Randall F. Smith, Director Office of Water, U.S. EPA Region 10 to Ernesta Ballard, Commissioner, ADEC (July 16, 2003))). KRPC argues that the Region refused "to approve the site-specific criterion at 500 [mg/l] during spawning because the ASTF study 'provides evidence that TDS of a composition similar to that present in the Red Dog Mine effluent has impacts on fertilization success in some salmonid species.'" *Id.* at 4 (quoting Admin. Rec. #60 (Letter from Randall F. Smith, Director Office of Water U.S. EPA Region 10 to Ernesta Ballard, Commissioner, ADEC (July 16, 2003))). KRPC argues that the Region "must ensure that the existing use, spawning arctic grayling, is protected before it approves the permit modification." *Id.* at 5.

The Region argues that "the Petition does not address whatsoever the Region's extensive discussion in the Response to Comments regarding the issue of whether the effluent limits in the Permit Modification adequately protect fish fertilization." Region's Response at 22 (citing Admin. Rec. #62 at 1-6, 11-14). This contention, however, is not correct. The Petition, by quoting the Region's July 16, 2003 decision, has placed squarely before the Board the question whether the juxtaposition of these two decisions — to not approve the 500 mg/l TDS limit as a site-specific criterion on July 16 and only one day later, on July 17, to approve that same limit as a condition of the Permit Modification — demonstrates clear error. The Region's response to comments certainly does not explain why it reached contrary decisions when considering the site-specific standard and when considering the identical limit under the Permit Modification, nor is an explanation readily apparent on the face of the record.

We are not inclined to speculate as to what the Region's reasons might be. We do note that, in the circumstances of this case, the distinction between "designated uses," which must be protected by the site-specific criterion, and "existing uses," which are to be protected by the antidegradation rule,[30] does not appear to

[30] The regulation governing EPA approval of state water quality criteria provides that the review involves a determination of "whether the State has adopted criteria that protect the designated water uses," among other things. 40 C.F.R. § 131.5(a)(2). In comparison, the regulation governing issuance of NPDES permits prohibits the issuance of a permit "when the imposition of conditions

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be the grounds for the Region's different conclusions: the Region specifically considered in both decisions the impact of the limit on arctic grayling spawning, thereby demonstrating that it views arctic grayling spawning to be both a designated use and an existing use. *Compare* Admin. Rec. #60, App. at 6 *with* Admin. Rec. #62 at 3-5.

The Region did explain in its response to comments that "[t]he data available to compare populations of arctic grayling in waters impacted by the mine's effluent * * * and those not impacted by the mine's effluent * * * indicate that there is no substantial difference between the population fluctuations in impacted and non-impacted waters," and the Region concluded that "the weight of evidence suggests that allowing TDS concentrations of 500 mg/l (the existing water quality standard) at the end of the mixing zone will not adversely impact the arctic grayling populations in the Red Dog Creek watershed." Admin. Rec. #62 at 5. However, we note that, in both decisions, the Region referred to the same data regarding observed spawning in the Mainstem of the Red Dog Creek and the North Fork Red Dog Creek and field sampling results. *Compare* Admin. Rec. #60, App. at 6 *with* Admin. Rec. #62 at 4-5. The Region's response to comments fails to provide any indication whatsoever why it analyzed these data differently for issuing the Permit Modification; nor does it explain why the Region determined that it required more information regarding the effects of TDS on arctic grayling spawning before approving the site-specific water quality criterion, but did not require any additional information before issuing the Permit Modification.

This simply does not satisfy the Region's duty under 40 C.F.R. § 122.4(d) not to issue the Permit Modification unless the new permit conditions ensure compliance with Alaska's water quality standards, including the antidegradation rule. The Region has not provided a explanation of its reasons for reaching different conclusions in its July 16 and 17 decisions regarding the adequacy of the 500 mg/l limit to protect and maintain arctic grayling spawning in the Mainstem of Red Dog Creek. *D.C. MS4*, 10 E.A.D. at 342-43. We have explained:

> The "administrative record must reflect the 'considered judgment' necessary to support the Region's permit determination." *In re Austin Powder Co.*, 6 E.A.D. 713, 720 (EAB 1997) (citing *In re GSX Services of South Carolina, Inc.*, 4 E.A.D. 451, 454 (EAB 1992). Specifically, the Region "must articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial

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(continued)
cannot ensure compliance with the applicable water quality requirements of all affected States." 40 C.F.R. § 122.4(d). The water quality requirements of Alaska would include Alaska's antidegradation regulation, which as noted above requires protection of all "existing uses."

> facts in reaching those conclusions." *In re Carolina Power & Light Co.*, 1 E.A.D. 448, 451 (Act'g Adm'r 1978) (citations omitted).

In re Ash Grove Cement Co., 7 E.A.D. 387, 417 (EAB 1987). In the present case, without a clear articulation of its reasons for not approving 500 mg/l as a site-specific criterion and approving 500 mg/l as a permit condition, we cannot determine that the Region's decision was something other than arbitrary and capricious. Accordingly, we remand the Permit Modification to the Region for further proceedings consistent with this decision.[31]

4. *Condition Governing In-stream TDS Concentrations in Ikalukrok Creek During Chinook (King) Salmon Spawning (Permit Condition I.A.8.e.3)*

The Permit Modification limits the Mine's discharges during salmon spawning after July 25 of each year based on an in-stream TDS limit of 500 mg/l at station 160 in Ikalukrok Creek. Admin. Rec. #61 at 7-8. KRPC requests review of this condition in the Petition's first argument.[32] KRPC requests that we grant review of this condition on the grounds that it is not supported by the evidence in the record because the ASTF Study "demonstrates reduced fertilization rates in salmon at TDS concentrations as low as 250 ppm." Petition at 1.

Review of this permit condition must be denied for two reasons. First, the Region argues that KRPC merely restates comments submitted in the public comment period without demonstrating why the Region's response to those objections is clearly erroneous or otherwise warrants review. Region's Response at 10-11. The Region is correct that our decisions have consistently held that 40 C.F.R. § 124.19(a) requires a petitioner to explain in the petition why the permit decisionmaker's previous response to the comments submitted during the public comment period is clearly erroneous or otherwise warrants review. *E.g.*, *In re South Shore Power, LLC*, PSD Appeal No. 03-02, slip op. at 10 (EAB June 4, 2003); *In re Envotech, L.P.*, 6 E.A.D. 260, 268 (EAB 1996); *accord Mich. Dep't. Envtl. Quality v. EPA*, 318 F.3d 705 (6th Cir. 2003) (upholding Board's dismissal of a petition for review). In the present case, KRPC sets forth in one sentence and one citation its argument that the TDS limit applicable to Ikalukrok Creek is not adequately protective of salmon spawning. KRPC wholly fails to even mention the

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[31] We emphasize that we are not concluding that a supportable basis for the seemingly inconsistent actions does not exist. But if it does exist, the record does not reflect it.

[32] KRPC also requested review of this condition in the Petition's fourth argument concerning Alaska's antidegradation regulation. However, since we conclude as explained above that the antidegradation issue was not properly preserved for appeal with respect to the TDS limit applicable to Ikalukrok Creek, we do not consider KRPC's antidegradation arguments in this part of our discussion.

Region's extensive response to public comments discussing the ASTF Study. This does not satisfy the threshold requirement of explaining why the Region's response to comments is clearly erroneous.

Second, the Region also correctly argues that, to the extent KRPC's request for review of the 500 mg/l TDS limit applicable to Ikalukrok Creek during salmon spawning rests on a contention that the Region's decision is not supported by the evidence in the record, KRPC's request should be denied because "[t]he 500 ppm concentration the Petitioner challenges is simply a straightforward application of an approved state water quality criterion that may not be challenged in this proceeding." Region's Response at 11. The Region notes that where aquatic life is the designated use, Alaska's statewide criterion for TDS, which was revised on April 29, 1999, and approved by EPA on April 29, 2002, allows TDS concentrations up to 500 mg/l. *Id.* at 11-12 (citing Admin. Rec. #6 at 9; Admin. Rec. #11 at 1). The Region contends that KRPC's argument that the TDS limit applicable to salmon spawning is not supported by evidence in the record "is simply a challenge to the scientific validity of the applicable TDS criterion," which may not be reviewed in this forum. *Id.* at 12.[33]

The Region is correct that, to the extent KRPC is arguing that evidence in the record shows that Alaska's statewide water quality criterion for TDS is not adequately protective of the aquatic life "designated use" for Ikalukrok Creek, KRPC's argument is a challenge to the water quality standard itself and may not be heard in this forum. As we explained above in Part III.C.2.a, a petitioner cannot argue in this forum that a State's water quality standards, or more specifically the State's numeric water quality criteria, are inadequate or somehow flawed. We have "denied in the context of NPDES permit appeals review of challenges to EPA's approval of state water quality standards." *In re City of Moscow, Idaho*, 10 E.A.D. 135, 161 (EAB 2001) (citing *In re City of Hollywood*, 5 E.A.D. 157, 175-76 (EAB 1994)). In *City of Hollywood*, we explained as follows:

> [T]hreshold issues pertaining to whether the Agency may have erred in approving the standard in the first instance are necessarily beyond our jurisdiction. Our jurisdiction is limited to reviewing whether the Region, as permit issuer, included a condition in the permit that properly implements the standard.

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[33] The Region does, however, acknowledge that its argument in this regard is not applicable to KRPC's additional contention that a more stringent TDS limit is required based on Alaska's antidegradation rule as set forth in the fourth part of KRPC's Petition. Region's Response at 12 n.7. As discussed above, this antidegradation issue was not properly preserved for appeal.

City of Hollywood, 5 E.A.D. at 176. The regulation governing EPA approval of state water quality standards provides that the review involves a determination of "whether the State has adopted criteria that protect the designated water uses," 40 C.F.R. § 131.5(a)(2), and the regulations require that each state's water quality standards submitted to EPA for approval must include "water quality criteria sufficient to protect the designated uses," 40 C.F.R. § 131.6(c). Thus, evaluation of whether the water quality criteria are protective of the designated uses is part of the Agency's process for approving state water quality standards and, therefore, review is denied to the extent that KRPC questions whether the "criteria" are protective of the "designated use." As we have observed, "threshold issues pertaining to whether the Agency may have erred in approving the standard in the first instance are necessarily beyond our jurisdiction." *City of Hollywood*, 5 E.A.D. at 176.

5. *KRPC's antibacksliding Argument*

KRPC has also argued that the less stringent TDS limits in the Permit Modification violate the "antibacksliding" prohibition in 33 U.S.C. § 1342(o), which restricts when a permit renewal or modification may contain less stringent limits. Petition at 3; KRPC's Reply at 13-14, 19-21. On its face, this argument would appear to be a challenge to all of the new, less stringent TDS limits in the Permit Modification, including the spawning season and non-spawning season limits. However, KRPC has made no attempt to demonstrate that questions regarding compliance with 33 U.S.C. § 1342(o) were raised during the public comment period. Accordingly, because raising all reasonably ascertainable issues and reasonably ascertainable arguments during the public comment period is generally a prerequisite for appeal, *In re City of Moscow, Idaho*, 10 E.A.D. 135, 141 (EAB 2001) (citing 40 C.F.R. § 124.19(a)), we must deny review of KRPC's argument except to the limited extent discussed below.

As we noted above in Part III.C.2, one exception to the requirement that issues must be raised during the public comment period applies when the issue raised on appeal pertains to a permit condition that was changed in the final permit from what was noticed for public comment in the draft permit. As noted in Part III.C.2, the Permit Modification's TDS limit applicable to Red Dog Creek during arctic grayling spawning was significantly changed from the draft to the final permit. Accordingly, KRPC's antibacksliding argument may be considered on appeal to the extent that the argument relates to the TDS limit applicable during arctic grayling spawning. Because Agency policy favors final adjudication of most permits at the Regional level, 45 Fed. Reg. at 33,412; *see also D.C. MS4*, 10 E.A.D. at 333; *Moscow*, 10 E.A.D. at 141, and because we have already determined to remand the TDS limit applicable during arctic grayling spawning on other grounds, we also remand the antibacksliding argument relative to this limit to allow the Region the opportunity to consider it if appropriate in the course of the remand proceeding.

IV. *CONCLUSION*

For the foregoing reasons, we deny KRPC's Petition in part and remand the Permit Modification to the Region for further proceedings consistent with this decision. We remand the in-stream TDS limit of 500 mg/l applicable in the Mainstem of Red Dog Creek during arctic grayling spawning. We reject KRPC's argument that permit modification in the circumstances of this case is not authorized by 40 C.F.R. § 122.62, and we deny review based on the antibacksliding issue under 33 U.S.C. § 1342(o), except to the extent that the issue pertains to the subject of our remand — the in-stream TDS limit of 500 mg/l applicable in the Mainstem of Red Dog Creek during arctic grayling spawning. We also deny review of the TDS limit applicable to Ikalukrok Creek during salmon spawning after July 25 of each year. An administrative appeal of the Region's decision on remand is required to exhaust administrative remedies under 40 C.F.R. § 124.19(f)(1). Any such appeal shall be limited to issues within the scope of the remand.

So ordered.