Case No. 12-35976

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIVE VILLAGE OF POINT HOPE, ALASKA COMMUNITY ACTION ON TOXICS, and NORTHERN ALASKA ENVIRONMENTAL CENTER,

Plaintiffs-Appellants,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,

Defendant-Appellee,

and

NANA REGIONAL CORPORATION, INC. and TECK ALASKA INCORPORATED,

Intervenor-Defendants-Appellees.

On Appeal from the United States District Court for the District of Alaska
The Honorable Timothy M. Burgess

APPELLANTS' REPLY BRIEF

Brook Brisson
Katherine Strong
Victoria Clark
TRUSTEES FOR ALASKA
1026 W. 4th Avenue, Suite 201
Anchorage, AK 99501
T: (907) 276-4244 F: (907) 276-7110

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

STATUTES

OTHER AUTHORITIES

REGULATIONS

GLOSSARY OF ACRONYMS

APA	Administrative Procedure Act
CWA	Clean Water Act (Federal Water Pollution Control Act)
DEC	Alaska Department of Environmental Conservation
EPA	Environmental Protection Agency
SSC	Site-specific criterion
TDS	Total Dissolved Solids

INTRODUCTION

Arctic grayling spawn and rear in Red Dog Creek. The species relies on clean water to survive and is an important subsistence food for Alaskan Natives. Contrary to the Environmental Protection Agency ("EPA"), and Teck Alaska, Inc. and NANA Regional Corp., Inc.'s ("Teck") contentions, EPA lacked necessary information about delayed and long-term impacts to Arctic grayling from exposure to total dissolved solids ("TDS") during fertilization when the agency approved the site-specific criterion for the spawning period. The scientific literature and researcher's conclusions demonstrated the potential for these impacts and called for additional studies. But the EPA failed to conduct those tests or reasonably explain why the tests were not necessary, making its decision to approve the site-specific criterion ("SSC" or "the criterion") unsupported by science to show that the criterion would protect designated uses. Accordingly, EPA's approval was arbitrary and capricious and should be vacated.

ARGUMENT

I. THE NATIVE VILLAGE OF POINT HOPE HAS STANDING.

Teck challenges the Native Village of Point Hope's standing,[1] arguing that no member has been injured because no member uses Red Dog Creek or eats fish

[1] EPA concedes that the Native Village of Point Hope has standing. EPA Brief at 16 n.7.

from Red Dog Creek. Teck Brief at 15, 18–20. This narrow recitation overlooks the Native Village of Point Hope's subsistence and cultural uses of fish from the Wulik River and the migratory lifecycle of Arctic grayling within the Wulik River watershed.[2]

Members of the Native Village of Point Hope rely on Arctic grayling from the Wulik River watershed for subsistence and cultural purposes. Franklin Sage eats fish caught in the Wulik River, including Arctic grayling, and participates in a cultural exchange of traditional foods that includes fish from the Wulik River system. II ER 31–32 ¶¶ 4, 6.[3] Contrary to Teck's contention that Mr. Sage failed to allege that he relies on Red Dog Creek for any reason, Mr. Sage stated that he uses fish from the Wulik River "and its tributaries," which includes Red Dog Creek. II ER 32 ¶ 4, 132-33. Jack Schaefer also discussed the importance of the "Wulik River system" and "Wulik River watershed" for subsistence use. *See*, *e.g.*, II ER 36 ¶ 14. Arctic grayling spawn in Red Dog Creek and then migrate to the Wulik

[2] For purposes of showing standing at summary judgment, Point Hope set forth facts about members' use of Arctic grayling, which must be accepted as true. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992). While Teck raises questions about those facts, Teck Brief at 15, 19, taking the facts in the declarations and record as true, the facts demonstrate that Mr. Sage and Mr. Schaefer use Arctic grayling that spawn in Red Dog Creek for subsistence and cultural exchanges.

[3] Citations to the excerpts of record filed by Point Hope are to the volume number, followed by the page number, *e.g.*, I ER 1. Citations to the joint supplemental excerpts of record filed by EPA and Teck are to "SER."

River, where some are caught by subsistence fishermen. II ER 32 ¶ 4, 138–40. The importance of the water quality where Arctic grayling spawn to Mr. Sage's use of the fish is not diminished by the migratory life cycle of the species. *See Am. Bottom Conservancy v. U.S. Army Corps of Eng'rs*, 650 F.3d 652, 657 (7th Cir. 2011) (recognizing that birds and butterflies move through habitats and that they use connected and adjacent areas, including the area where plaintiffs view the species and the separate area that would be filled).[4]

Mr. Sage stated that he removes the outer layer of fat from fish to protect his health. II ER 32 ¶ 5.[5] Similarly, Mr. Schaefer stated that he participates in the cultural food exchange of fish from the Wulik River with the residents of Kivalina and that if the water is not clean enough to support fish, he will lose an important

[4] To satisfy Teck's standing arguments, there would have to be some distinguishing characteristic of fish that spawn in Red Dog Creek, or all the fry would have to be tagged to show that a tribal member ate a fish that spawned in Red Dog Creek as opposed to another tributary of the Wulik River. *See* Teck Brief at 18, 19–20. This is unreasonable burden to establish standing and not required. *See*, *e.g.*, *Japan Whaling Ass'n v. Am. Cetacean Soc'y*, 478 U.S. 221, 230 n.4 (1986) (finding injury in fact where an organization's member's whale watching and study was adversely affected by continued whale harvest); *Ctr. for Biological Diversity v. U.S. Dep't of the Interior*, 563 F.3d 466, 472, 479 (D.C. Cir. 2009) (finding standing based on the use of marine animals, including many migratory species).

[5] Teck relies on a statement by counsel at oral argument that neither Mr. Sage nor Mr. Schaefer personally engages in this practice. Teck Brief at 24. To the extent that counsel for Point Hope misspoke regarding the contents of Mr. Sage's declaration describing his participation in this practice, SER 46–47, his declaration clearly states that he participates in the practice, given his use of the inclusive term "we." II ER 32 ¶ 5.

subsistence resource. II ER 34 ¶ 7, 36 ¶ 14.[6] The reduction or loss of Arctic grayling in the Wulik River system because of the water quality criterion directly impacts the tribal members' subsistence and cultural use of the fish and the continued availability of the resource. *See Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 859 (9th Cir. 2004) (a plaintiff can show injury by "showing a connection to the area of concern sufficient to make credible the contention that the person [will suffer an injury] . . . if the area in question remains or becomes environmentally degraded") (quoting *Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1149 (9th Cir. 2000)); *Ctr. for Biological Diversity v. U.S. Dep't of the Interior*, 563 F.3d at 472, 479 (finding standing based on the use of marine animals, including many migratory species).

Teck's challenge to the Native Village of Point Hope's standing is essentially a claim that it prove the merits: "neither Mr. Sage nor Mr. Schaefer

[6] Teck takes issue with the concerns expressed in Mr. Schaefer's declaration about tribal members and tribal interests, asserting that they are hearsay. *See*, *e.g.*, Teck Brief at 19–20, 23. They misunderstand part of the purpose of Mr. Schaefer's declaration. Mr. Schaefer's declaration not only serves the purpose of explaining Mr. Schaefer's connection to the Arctic grayling (consumption of fish from the Wulik River system through a cultural food sharing), but also to express the interests and concerns of the Native Village of Point Hope to show representational standing, *i.e.*, that the interests are germane to the organization. *See* Opening Brief at 29. Mr. Schaefer also identified himself as a tribal member, II ER 33 ¶ 2, so the concerns he identified necessarily include him. Additionally, while Teck raised the question of whether the statements were inadmissible hearsay in its summary judgment briefs, it did so by passing reference; it never moved to strike or exclude the evidence and the District Court judge never made a ruling to limit or exclude the evidence. *See* IV ER 478–80, SER 24, 43.

testifies that there has been any actual water quality impact, a[] reduction in 'fish' survival or a [] reduction in the availability of subsistence resources." Teck Brief at 26 n.13. Standing is not a question of proving the merits of the case, and the Native Village of Point Hope does not need to show actual harm to the environment to prove standing. *See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 181 (2000) (stating that insisting on a showing of harm to the environment raises the showing for standing above the showing for success on the merits and is not the test); *Ocean Advocates*, 402 F.3d at 860 (same) (citations omitted). The concerns about the impact of the criterion on Arctic grayling and the risk that impact poses to Mr. Sage and Mr. Schaefer's subsistence and cultural interests are sufficient to establish standing. *See Laidlaw*, 528 U.S. at 183–84; *see also Summers v. Earth Island Inst.*, 555 U.S. 488, 494 (2009) (stating, "[w]hile generalized harm to the forest or the environment will not alone support standing, if that harm in fact affects the recreational or even the mere esthetic interests of the plaintiff, that will suffice.").

Teck also challenges causation and redressability, claiming that both tribal members "rotely state" that they are concerned about TDS, but that they are really concerned with discharges from the Red Dog Mine ("the Mine"). Teck Brief at 26. This argument ignores Teck's basis for requesting the water quality criterion and clear statements by Mr. Sage and Mr. Schaefer. The criterion was requested to

serve as the basis for a much more lenient TDS permit limit, allowing the Mine to discharge higher concentrations of TDS pollution. II ER 130. Additionally, while Mr. Sage expressed concerns about pollution from the Mine, he expressly stated that he is worried that the criterion fails to protect fish in the Wulik River system and the ability of his family to continue subsistence fishing. II ER 32 ¶¶ 6, 7. Likewise, Mr. Schaefer noted concerns about pollution from the Mine, and also expressly stated that he understood that because of EPA's approval of the criterion, the water quality standard will be less stringent and there will be increased discharges of TDS, which will impact water quality and fish. II ER 35–36, ¶¶ 10, 12. That they have concerns related to pollution from the Mine (which includes TDS pollution) does not preclude them from showing causation; in fact, as the only industrial discharger of TDS for miles around, the Mine is clearly the source of the concern. *See Natural Res. Def. Council v. Sw. Marine, Inc.*, 236 F.3d 985, 994–95 (9th Cir. 2000) (the injury must be fairly traceable to the challenged action and not an action of some third party not before the Court) (citations omitted). EPA's approval of the criterion threatens fish populations and fish health, and if the Court vacates the criterion, the threats and injuries from the too-high criterion will be eliminated. *See Barnum Timber Co. v. U.S. EPA*, 633 F.3d 894, 901 (9th Cir. 2011) (stating that a party does not need to "eliminate any other contributing causes" for causation and redressability) (citing *Ocean Advocates*, 402 F.3d at 860).

Accordingly, the Native Village of Point Hope has established the elements of standing, including causation and redressability.[7]

II. THE CONSERVATION ORGANIZATIONS HAVE STANDING.

Teck asserts that Alaska Community Action on Toxics ("ACAT") and the Northern Alaska Environmental Center ("NAEC") conceded that they lack standing unless they are granted an "exemption" from *Sierra Club v. Morton*, 405 U.S. 727 (1972). Teck Brief at 29. This demonstrates a misunderstanding of ACAT and NAEC's standing and *Morton* itself. ACAT and NAEC assert organizational standing based on injury to the organization under *Havens Realty Corp. v. Coleman,* 455 U.S. 363, 369 (1982).[8] Organizational standing is not an exemption from *Morton*; as the Supreme Court recognized, *Morton* provides the backstop for an organization's standing, under *Havens* or otherwise. *See Havens*, 455 U.S. at 379.

---

[7] Teck asserts that because there is no Article III injury, the Native Village of Point Hope's interests do no fall within those protected by the Clean Water Act ("CWA"). Teck Brief at 25 n.12. As explained in Point Hope's Opening Brief, the injuries are within those interests protected by the CWA. Opening Brief at 33–34.

[8] As noted by Point Hope and EPA, Opening Brief at 29 n.18; EPA Brief at 16 n.7, standing for one plaintiff obviates the need to reach the issue of standing for the other plaintiffs. *See Comite de Jornaleros de Redondo Beach v. City of Redondo Beach*, 657 F.3d 936, 943-44 (9th Cir. 2011). Accordingly, should this Court find that the Native Village of Point Hope has standing, it need not address whether the conservation organizations have satisfied the *Havens* test.

The Supreme Court in *Havens* was clear: if the organization meets the same test as an individual, it has standing to sue. *Id.* at 378–79. To show injury, the organization must show a "concrete and demonstrable injury to the organization's activities — with the consequent drain on the organization's resources." *Id.* at 379. As the Supreme Court recognized, this test ensured that the organization had more than just an interest in a problem. *Id.* (citing *Morton*, 405 U.S. at 739, and stating that the showing made by the plaintiff organization (called "HOME") ensured that it suffered "more than simply a setback to the organization's abstract social interests" like the organization in *Morton*). ACAT and NAEC meet this test. *See* Opening Brief at 29–33.

Contrary to Teck's assertions that the Court found standing in *Havens* based on the fact that HOME, had to go outside of core programs, its core activities included *investigation* of housing discrimination complaints. *See* 455 U.S. at 368; Teck Brief at 30. In *Havens*, HOME advocated for "equal opportunity in housing" by undertaking activities such as counseling services, investigation, and complaint referral. 455 U.S. at 368. HOME brought suit in its own capacity, asserting that defendant's racial steering practices "frustrated" its equal housing counseling and referral efforts and that it had to divert resources — the hiring of two "testers" — to "identify and counteract" the problem. *Id.* at 369–70, 379. The Court's decision,

therefore, rested on the increased expenditure of resources in one of its core programs.

Teck relies on *La Asociacion de Trabajadores de Lake Forest v. City of Lake Forest*, 624 F.3d 1083 (9th Cir. 2010), to assert that ACAT and NAEC's injury is self-inflicted and that the organizations fail to allege that they would suffer some other injury absent a diversion of resources. Teck Brief at 31–32, 34–35. But the Court in *Lake Forest* resolved the standing issue on pleading grounds by applying the rule that a party cannot use summary judgment briefing to "effectively amend its Complaint." 624 F.3d at 1089 (citing *Wasco Prods., Inc. v. Southwall Techs., Inc.*, 435 F.3d 989, 992 (9th Cir. 2006) (stating, "Simply put, summary judgment is not a procedural second chance to flesh out inadequate pleadings.")); *see also Lake Forest*, 624 F.3d at 1088 (stating, "[w]ithout making any attempt to allege organizational standing in its complaint, [the plaintiff's] provision of affidavits and declarations supporting organizational standing at the summary judgment stage is ineffectual."). The Court's discussion of organizational standing was *dicta*, not an articulation of a stricter version of the organizational standing test, as intimated by Teck. *See Black's Law Dictionary* (9th ed. 2009) (defining *obiter dictum* as "[a] judicial comment made while delivering a judicial opinion, but one that is unnecessary to the decision in the case and therefore not

precedential (although it may be considered persuasive)"); *see also* Teck Brief at 31–32, 32 n.14.[9]

The organizational standing test articulated by the Ninth Circuit requires that an organization show a "'drain on its resources from both a diversion of its resources and a frustration of its mission.'" *Roommate*, 666 F.3d 1219 (quoting *Fair Hous. of Marin v. Combs*, 285 F.3d 899, 905 (9th Cir. 2002)); *see also* Opening Brief at 29–30.[10] An organization cannot base standing on litigation costs

[9] Teck relies on language from *Lake Forest* to assert that ACAT and NAEC must show that they would have suffered some other injury if they did not divert resources to address the EPA's approval of the criterion. Teck Brief at 31–32, 34, 36; *see Lake Forest*, 624 F.3d at 1088 ("It must instead show that it would have suffered some other injury if it had not diverted resources to counteracting the problem."). The language in *Lake Forest* is qualified by the preceding sentence, where the Court explained that an organization "cannot manufacture the injury by incurring litigation costs or simply choosing to spend money fixing a problem that otherwise would not affect the organization at all." 624 F.3d at 1088. And the examples cited by the Court and its subsequent application of the doctrine illustrate that the showing Teck claims is lacking is not required. *See Lake Forest*, 624 F.3d at 1088 (citing *Havens*, 455 U.S. at 379, *Smith v. Pac. Props.& Dev. Corp.*, 358 F.3d 1097, 1105 (9th Cir. 2004), *El Rescate Legal Servs., Inc. v. Exec. Office of Immigration Review*, 959 F.2d 742, 748 (9th Cir. 1991); *Fair Hous. Council of San Fernando Valley v. Roommate.com, LLC*, 666 F.3d at 1216, 1219 (9th Cir. 2012).

[10] Teck cites multiple D.C. Circuit and District Court cases to assert that *Havens* requires more than budgetary choices about how to spend resources or an abstract conflict between the defendant's actions and the plaintiff's mission. Teck Brief at 33–34. The D.C. Circuit's recent opinion in *Equal Rights Center v. Post Properties, Inc.*, clarifies that Circuit's precedent by explaining that while litigation expenses cannot provide the basis for the injury, the voluntary diversion of resources expended on efforts to address the problem could show injury. 633 F.3d 1136, 1138–41 (D.C. Cir. 2011); *see also We are Am./Somos Am., Coal. of Ariz. v. Maricopa County Bd. of Supervisors*, 809 F. Supp. 2d 1084, 1100 (D. Ariz. 2011)

or assert an injury by "simply choosing to spend money fixing a problem that otherwise would not affect the organization at all." *Roommate*, 666 F. 3d at 1919 (quoting *Lake Forest*, 624 F.3d at 1088). But a diversion of resources from other programs or efforts to take action in response to the defendant's action is sufficient. *See*, *e.g.*, *Roommate*, 666 F.3d at 1219; *Smith v. Pac. Props.*, 358 F.3d at 1105; *El Rescate Legal Servs.*, 959 F.2d at 748; *see also Comite de Jornaleros de Redondo Beach*, 657 F.3d at 943 (adopting the panel's standing analysis as its own).

The EPA's approval of the much higher TDS criterion frustrated both ACAT and NAEC's missions and program work to protect clean water. II ER 39–40 ¶13, 43 ¶ 11. As a result of EPA's approval, both groups have expended resources educating their members and the public and have participated in later permitting processes that seek to incorporate an effluent limitation based on the criterion. II ER 39 ¶¶ 10, 11, 40 ¶ 14, 43 ¶12. Those expenditures are independent of litigation expenses. ACAT and NAEC, therefore, meet the injury test for organizational standing. *See Smith v. Pac. Props.*, 358 F.3d at 1105; *see also* Opening Brief at 30–31.

(explaining that the D.C. Circuit's precedent focused not on the voluntariness of the diversion of resources but on whether the voluntary diversion was in response to and to counteract the defendant's conduct, and not in anticipation of litigation).

Contrary to Teck's assertion, there is nothing indirect about the cause of their injury; they diverted resources "[a]s a result of the EPA's decision." II ER 40 ¶ 14; II ER 43 ¶ 12; *see* Teck Brief at 36. If this Court vacates the criterion, the resources currently expended in response to EPA's approval can be directed elsewhere, redressing the injury. Therefore, ACAT and NAEC have proven organizational standing.

III. EPA LACKED INFORMATION ABOUT THE LONG-TERM AND DELAYED IMPACTS OF TDS EXPOSURE AT FERTILIZATION, RENDERING ITS APPROVAL ARBITRARY AND CAPRICIOUS.

The report, *Salmon as a Boiassay Model for Effects of Total Dissolved Solids* ("Stekoll Report") showed not only impacts to fertilization success, but also delayed and long-term impacts to egg survival from exposure to TDS during fertilization. Based on those results, the Stekoll Report advised of the need for both short-term and long-term tests to determine impacts to untested species like Arctic grayling. When EPA approved the site-specific criterion, it lacked any information about the delayed and long-term impacts of TDS exposure at fertilization to Arctic grayling. Despite its assertions to the contrary, EPA also failed to explain why that information was not necessary. Without this information, EPA could not reasonably conclude that the criterion would protect designated uses, as required

by the CWA. *See* 33 U.S.C. § 1313(c)(2); 40 C.F.R § 131.5(a)(2).[11] Accordingly, its approval was arbitrary and capricious. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).[12]

Both EPA and Teck argue that EPA is not required to eliminate all scientific uncertainty and that the Court must defer to EPA's decision not to require additional studies. EPA Brief at 20–21, 26–27; Teck Brief at 38–39. While EPA is generally entitled to a high level of deference in the realm of scientific and technical decisions, deference in this area is not automatic, nor is it the equivalent

---

[11] EPA appears to downplay its role in reviewing and approving the criterion to one of only ensuring sufficient science to support the Alaska Department of Environmental Conservation's ("DEC") decision. EPA Brief at 12–13, 18. Teck also relies heavily on DEC's approval in an attempt to bolster EPA's approval. Teck Brief at 43. The CWA is clear: EPA must independently review a state's approved criterion and determine that it will protect designated uses. 33 U.S.C. § 1313(c)(2); *see also* 40 C.F.R. § 131.5(a)(2) (requiring that EPA's approval include a determination of "[w]hether the State has adopted criteria that protect the designated water uses"). That DEC approved the criterion does not relieve EPA of this independent duty or lessen its obligation to ensure that the criterion protects designated uses. *See Miccosukee Tribe of Indians of Fla. v. U.S. EPA*, 105 F.3d 599, 602 (11th Cir. 1997).

[12] Teck asserts that Point Hope abandoned all CWA claims and only maintains a claim that EPA violated the Administrative Procedure Act ("APA"). Teck Brief at 5. This incorrect statement is based on a misunderstanding of review under the APA. Review under the APA of an agency's action is pursuant to an underlying substantive law. *See Or. Natural Res. Council v. Thomas*, 92 F.3d 792, 798–99, 798 n.11 (9th Cir. 1996); *El Rescate Legal Servs.*, 959 F.2d at 753; *see also Sierra Club v. Martin*, 110 F.3d 1551, 1554–55 (11th Cir. 1997). Point Hope's argument on appeal is that the site-specific criterion failed to protect designated uses as required by CWA and EPA's regulations, rendering EPA's approval arbitrary and capricious. *See* II ER 57–58 (Count I of First Amended Complaint).

of no review. *Greater Yellowstone Coal., Inc. v. Servheen*, 665 F.3d 1015, 1028 (9th Cir. 2011) (stating, "[i]t is not enough for the Service to simply invoke 'scientific uncertainty' to justify its action."). Even under the narrow arbitrary and capricious standard and even when reviewing technical or scientific matters, an agency "has an obligation . . . to state a rational connection between the facts found and the decision made." *Native Ecosystems Council v. Tidwell*, 599 F.3d 926, 932 (9th Cir. 2010) (citations and quotations omitted). "The presumption of agency expertise can be rebutted when its decisions, while relying on scientific expertise, are not reasoned." *Brower v. Evans*, 257 F.3d 1058, 1067 (9th Cir. 2001) (citation omitted); *see Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 422 F.3d 782, 798–99 (9th Cir. 2005) (stating, "the deference accorded an agency's scientific or technical expertise is not unlimited. Deference is not owed when the agency has completely failed to address some factor consideration of which was essential to making an informed decision.") (internal quotation and citation omitted); *see also Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1121 (9th Cir. 2008) (on the issue of methodology, the Court "cannot defer to a void."). Here, EPA is not entitled to deference because the agency failed to justify the lack of studies on the delayed and long-term impacts to Arctic grayling from TDS exposure at fertilization and that information was necessary to a reasoned decision

that the criterion protects the designated uses of Red Dog Creek. *See* Opening Brief at 18–24.

A. THE STEKOLL REPORT DEMONSTRATED THE NEED FOR ADDITIONAL STUDIES SPECIFIC TO ARCTIC GRAYLING.

The Stekoll Report observed delayed and long-term impacts to salmonids fertilized in high concentrations of TDS, including compound impacts from exposure to TDS during fertilization. The Stekoll Report concluded that the results were significant and recommended additional tests on other species to determine the impacts. Those additional tests were not conducted prior to EPA's approval of the spawning criterion. Additionally, EPA's approval in 2003 of a TDS water quality criterion for times other than spawning did not consider the delayed or compound impacts from exposure during spawning. EPA needed that additional information but did not have it.

1. The Stekoll Report's Findings and Recommendations Were Not Limited to Just Impacts from Short-Term Exposure at Fertilization.

EPA is incorrect that the only core finding of the Stekoll Report was that TDS impacted fertilization success. EPA Brief at 23, 26, 29, 30–31. The Stekoll Report also "found *significant* effects on the long-term survival of embryos exposed at fertilization to this TDS mixture." III ER 303 (emphasis added); *see* III ER 284 (stating, "when the coho were exposed at fertilization, *significant* effects

were observed.") (emphasis added); *see also* III ER 441 (Stekoll email reporting that the first year of studies showed a delayed effect from exposure at fertilization).

Additionally, a chronic test in which eggs were fertilized in high TDS concentrations resulted in nearly 50% of the eggs dying before hatch. III ER 345. EPA attempts to discount this result by stating that the Stekoll Report was not clear if the impact was due to a lack of fertilization, not post-fertilization egg mortality, and whether the later impact was significant. EPA Brief at 32–33. That the Stekoll Report did not differentiate the specific stage at which the impact occurred when reporting the results is not important because the purpose of the chronic test was to determine the long-term impacts from exposure during fertilization. III ER 268, 270. Instead, the Stekoll Report's conclusion that "[h]igher TDS concentrations at fertilization were related to higher pre-hatch mortality rates," III ER 354, is the crux of the issue because it shows that high TDS at fertilization has both immediate impacts on fertilization as well as delayed impacts to eggs that are successfully fertilized.[13]

[13] EPA cites to the definitions of "acute" and "chronic" to assert that it did not need information about delayed or chronic impacts from TDS exposure at fertilization prior to approving the criterion. EPA Brief at 23. As EPA acknowledges, the definitions of "chronic" and "acute" indicate that the criterion should account for impacts from short-term and long-term exposures. EPA Brief at 23. Those impacts could be delayed or compound. Point Hope does not maintain that information about delayed effects are necessary in *every* case; only that it was necessary in this case given the observations of delayed and long-term impacts to salmonids and EPA's conclusion that it could not extrapolate the results of the Stekoll Report to

Further, EPA's contention that it was unclear if there was a "significant" impact from pre-hatch egg mortality in the test is unavailing given that the agency set the limit of an acceptable impact in the *Report on the Effects of Total Dissolved Solids on Arctic Grayling and Dolly Varden Fertilization Success* ("Brix Report") at 20% effect. In other words, EPA determined that a 20% impact was an adverse effect to protect against. EPA Brief at 31–32; *see* II ER 105, 189; *see also U.S. EPA Water Quality Standards Handbook: Second Edition, Glossary* (1994) (Addendum to Reply Brief at 4) (defining "Effective concentration" as "the toxicant concentration that would cause an observable adverse effect . . . in a given percentage of the test organisms").

Contrary to EPA's arguments, the Stekoll Report did not only conclude that future tests should be limited to just fertilization success. Based on the results that showed delayed and long-term impacts, the Stekoll Report also recommended that tests to measure the delayed or long-term impacts from exposure be conducted: "[i]t is important to look at not only the immediate effects of exposure, but to look also at later or delayed effects of exposure to a toxicant. Eggs in our experiment that were fertilized in TDS had more problems afterward." III ER 284; *see also* III

---

determine the impacts to Arctic grayling. *See* Opening Brief at 21–22. Requiring this additional information is consistent with EPA's guidance documents on setting water quality criteria. *Id.* (citing III ER 450–54, 456, 457; *U.S. EPA Water Quality Standards Handbook* §§ 3.3, 3.5.1 (Statutory Addendum to EPA's Brief at 9, 10–11)); *see also* IV ER 490–92 (instructing that chronic studies should be obtained in setting water quality criteria).

ER 285 (concluding that "[m]ore research needs to be done before limits on TDS are set regarding discharge into natural waters in Alaska" with regards to the acute tests to measure delayed impacts); III ER 355 (noting that long-term tests may be prudent). The results and conclusions of the Stekoll Report, therefore, support the need for additional studies on Arctic grayling to determine delayed or long-term impacts from TDS exposure at fertilization.

EPA and Teck assert that completing a follow-up study on only the impacts of TDS on fertilization was consistent with the Stekoll Report's primary finding and its recommendation for further studies, as evidenced by a follow-up study by Stekoll himself. EPA Brief at 26–29, 33; Teck Brief at 47–48. This reliance is misplaced. The Stekoll Report's objective in developing the acute test was to design a test that could be easily replicated and used on different species. III ER 286, 302–03; *see also* II ER 104; III ER 215. The Stekoll Report stated that it was unknown if the short-term test could be applied to other species and recommended further testing to make that determination. III ER 302. The follow-up study conducted by Stekoll on Arctic grayling was to determine the test's application to other species, namely Arctic grayling.

In the follow-up study, Stekoll cautioned that the information provided by the acute test was very limited and restated the findings from the Stekoll Report (and another scientist) that chronic exposure from fertilization to the fry stage

resulted in lower rates of survival. SER 292. In the later study, Stekoll specifically cautioned that "[e]xtrapolations to other developmental stages, other species, and even other populations of these species would not necessarily be accurate." SER 292. This statement is consistent with the statement in the Stekoll Report that the acute test provided limited information: "the assay does not yield any information about the possibility of long-term or delayed effects;" "there might be other effects of exposure to a toxicant that will not be seen." III ER 303. Additionally, the Stekoll Report concluded that future tests "could include short term bioassays at critical stages" and that "[o]ther long-term assays could be employed if deemed necessary for understanding effects to critical populations." III ER 355. The later tests by Stekoll do not demonstrate that follow-up studies on delayed impacts were unnecessary. This argument should be rejected.

2. EPA's 2003 Approval of a Criterion for Times Other Than Spawning Cannot Be Used to Justify the Lack of Information Relating to Impacts from Exposure at Fertilization.

EPA and Teck rely on the 2003 approval for a high TDS criterion at later life stages to argue that EPA did not need information about fertilization exposure to increase the TDS criterion during spawning. EPA Brief at 31–32; Teck Brief at 40. In 2003, the criterion during spawning was maintained at 500 mg/L, while the criterion for the rest of the year was raised to 1,500 mg/L. III ER 210. The fact that the Stekoll Report showed impacts from continuous exposure is what drives the

need for information specific to Arctic grayling. With EPA's approval in 2003 of a 1,500 mg/L limit for times other than spawning, combined with EPA's 2006 approval of a 1,500 mg/L criterion during spawning, EPA was approving the same conditions that the Stekoll Report showed increased mortality to salmonids from TDS exposure, *i.e.*, fertilization in high TDS concentrations, followed by egg development and hatch in high TDS concentrations. *See* III ER 354. If there were compound impacts from this exposure scheme, EPA needed to understand those impacts before it could conclude that the criterion for the spawning period would protect designated uses.

Further, while EPA did conclude that later life stages would be protected in its 2003 approval, that approval did not conclude that there would be no delayed or long-term impacts from exposure to TDS at 1,500 mg/L *during fertilization*. To the contrary, EPA expressly concluded that it could not extrapolate the results from the Stekoll Report to Arctic grayling, *i.e.*, it could not extrapolate the concentration at which impacts from fertilization exposure occurred in other salmonids to Arctic grayling. III ER 210; *see also* II ER 100, 103 (2006 approval). EPA did not qualify its 2003 conclusion regarding its inability to extrapolate the results to just the short-term acute fertilization tests (as described in Part II.B of the Stekoll Report). III ER 218; *see also* III ER 354 & SER 292 (Stekoll himself did not qualify his

conclusion that the results could not be extrapolated to other stages, other species, or other populations of a species);[14] Opening Brief at 22–23.

In sum, the record does not support EPA's interpretation of the Stekoll Report. The results of the Stekoll Report showed delayed and long-term impacts from exposure at fertilization. The Stekoll Report found these impacts "significant" and stated that additional studies on species were needed. But in spite of Stekoll's observations about the delayed and long-term impacts and the report's conclusion about the importance to test for these impacts, the Brix Report only looked at whether eggs fertilized successfully, and EPA did not require any additional tests to measure delayed or long-term impacts. II ER 182. EPA needed to know if there were delayed or compound impacts from TDS exposure at fertilization, as indicated by the Stekoll Report, to ensure that the criterion protected designated uses. *See* 33 U.S.C. § 1313(c)(2); 40 C.F.R. § 131.5(a)(2).

B. THE FIELD SURVEYS DO NOT SUPPORT EPA'S APPROVAL.

Both EPA and Teck rely on field surveys to assert that there are no impacts from TDS exposure outside of the spawning period; Teck further argues that field

[14] Teck also asserts that because the Stekoll Report showed delayed effects from fertilization exposure at concentrations greater than the criterion approved means that there was no need for additional information. Teck Brief at 46–47. This argument also fails because of EPA's conclusion that it could not extrapolate the results from the Stekoll Report to Arctic grayling. III ER 210; *see* Opening Brief at 22–23, 23 n.13.

surveys show that there are no impacts to spawning from exposure. EPA Brief at 19; Teck Brief at 39–40, 43 n.22, 47. This argument ignores important facts. Prior to EPA's approval of the SSC, the TDS criterion in the Main Stem of Red Dog Creek was maintained at 500 mg/L during spawning. II ER 118, 145; SER 150. The field surveys, therefore, merely indicate that the previous criterion of 500 mg/L may be protective. SER 72, 187; *see also* III ER 238–39; IV ER 483–84. The field surveys do not demonstrate that a criterion of 1,500 mg/L during spawning would protect Arctic grayling and not cause delayed or long-term impacts from exposure.[15] EPA's reliance on the field surveys in place of specific information in making its approval is, therefore, misplaced.[16]

---

[15] Teck asserts that because Arctic grayling use of Red Dog Creek has expanded since mining began and that because metals concentrations are lower, that there is no impact of TDS on Arctic grayling. Teck Brief at 39–40, 47. This argument is a *non sequitur*. That there are fewer metals impacting Arctic grayling in Red Dog Creek does not mean that higher levels of TDS in Red Dog Creek will not impact Arctic grayling. EPA had a duty to ensure that TDS at concentrations of 1,500 mg/L protected Arctic grayling spawning. 33 U.S.C. § 1313(c)(2); 40 C.F.R. § 131.5(a)(2). Additionally, it is not clear that Arctic grayling populations in the Red Dog Creek watershed have increased. *See* III ER 217.

[16] Teck's related argument that there is no evidence to show that a criterion of 1,500 mg/L could impact Arctic grayling is contrary to the record. Teck Brief at 13–14; *see* Opening Brief at 19–20; III ER 283–84, 345, 354. To the extent that Teck's assertion is based on the fact that the evidence of delayed or chronic impacts is not specific to Arctic grayling, that merely highlights the problem with EPA's approval: there is no data specific to Arctic grayling in the record to show that the 1,500 mg/L criterion during spawning will not cause delayed or chronic impacts.

C. THE LITERATURE REVIEW SUPPORTS THE NEED FOR INFORMATION ABOUT THE DELAYED AND LONG-TERM IMPACTS.

EPA attempts to write-off the conclusion in a literature review that "[c]oncentrations of TDS in the range of 750 mg/L significantly reduces fertilization and hatching rates" and "extends the development time to epiboly and the eyed-egg stage." III ER 367. Its arguments that fertilization and hatch are different life stages and that the report does not indicate "when or for how long" the eggs were exposed to TDS are unavailing. EPA Brief at 31 n.10; *see also* II ER 103; III ER 216. To the extent that the literature review was not clear and that EPA was interpreting it one way, the agency needed to explain that when it approved the criterion, but it did not. *See Nw. Envtl. Def. Ctr. v. Bonneville Power Admin.*, 477 F.3d 668, 688 (9th Cir. 2007) (stating that the Court cannot accept "post hoc rationalizations for agency action") (internal quotation and citation omitted). Instead, EPA deemed the review "thorough" and stated that the conclusion was "relevant to Red Dog Creek." III ER 212–18. That there were uncertainties with the conclusion in the report necessitated at a minimum a response from EPA regarding EPA's interpretation of that information, but none was given. *See* II ER 103 (EPA's 2006 approval); III ER 216 (EPA's 2003 approval). The importance of the literature review in the context of the EPA's approval was that it concluded that the current science indicated that there could be delayed or long-term impacts from TDS exposure at a concentration of half of the criterion approved. The literature

review, therefore, indicated the need for information specific to Arctic grayling about the delayed or long-term impacts of TDS exposure at fertilization.

CONCLUSION AND RELIEF REQUESTED

Without information about delayed and long-term impacts to Arctic grayling from TDS exposure at fertilization, EPA could not reasonably conclude that the criterion protected Arctic grayling spawning. *Cf. Natural Res. Def. Council v. U.S. EPA*, 529 F.3d 1077, 1085 (D.C. Cir. 2008) (deferring to EPA's decision when there were data gaps because the agency accounted for the uncertainties by making conservative assumptions). Accordingly, EPA's approval was arbitrary and capricious. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43.

For the foregoing reasons, this Court should reverse the district court's judgment, vacate EPA's approval of the criterion, and remand the matter to EPA to undertake a proper evaluation of the criterion.

Respectfully submitted this 19th day of June, 2013, at Anchorage, Alaska.

s/ Brook Brisson
Brook Brisson
Attorney for Plaintiff-Appellant
TRUSTEES FOR ALASKA

Attorneys for Appellants Native Village of Point Hope IRA Council, Alaska Community Action on Toxics, and Northern Alaska Environmental Center

CERTIFICATE OF COMPLIANCE WITH FRAP 32(a)(7)

Pursuant to Circuit Rule 32-1, I hereby certify the following:

This brief complies with the word limitations set forth in FRAP 32(a)(7)(B). It contains 6,576 words, excluding the parts of the brief exempted by FRAP 32(a)(7)(B)(iii); and

This brief complies with the typeface requirements of FRAP 32(a)(5) and type style requirements of FRAP 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2010 14 points Times New Roman.

DATED: June 19, 2013

s/ Brook Brisson
Brook Brisson

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing APPELLANTS' REPLY BRIEF and APPELLANTS' EXCERPTS OF RECORD VOLUME IV with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on June 19, 2013.

DATED: June 19, 2013.

s/ Brook Brisson
Brook Brisson

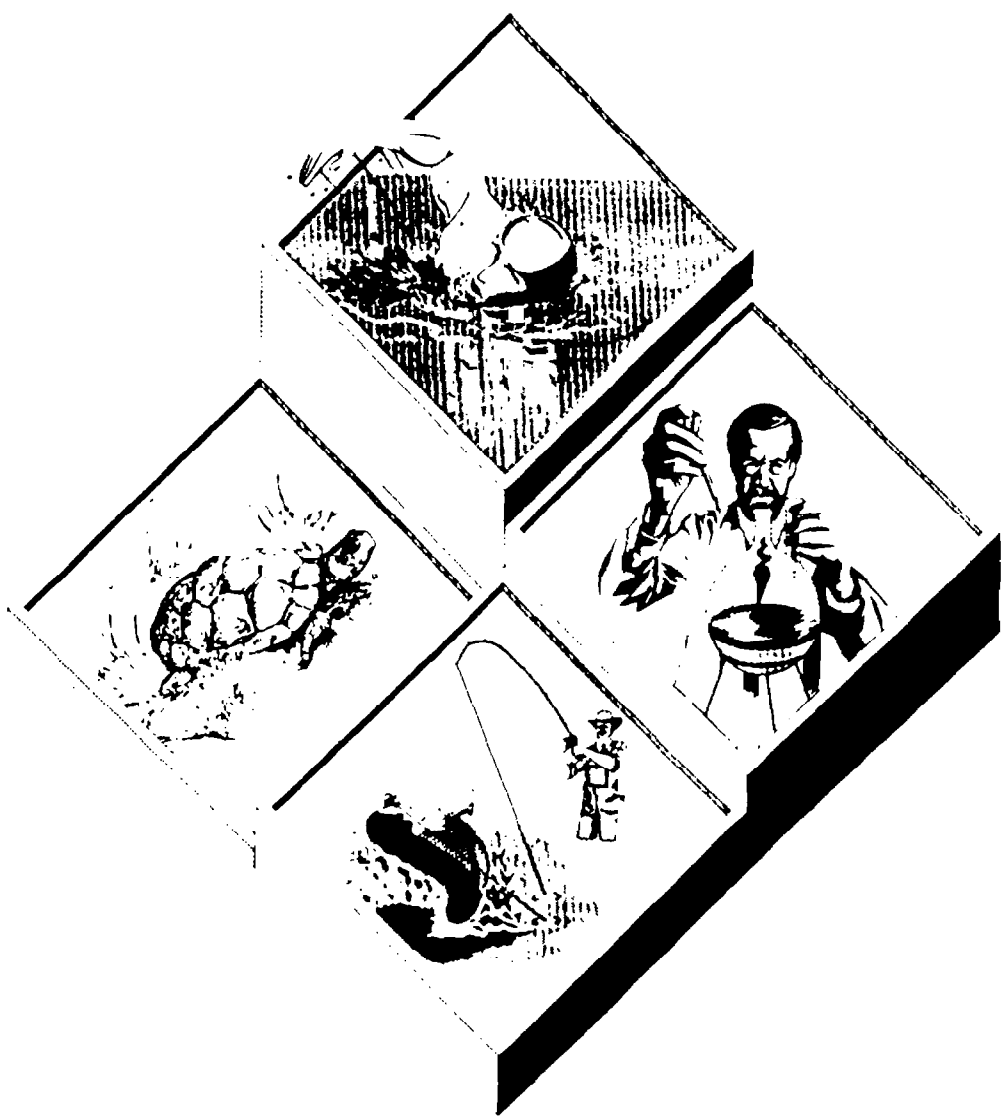
ADDENDUM
U.S. EPA, Water Quality Standards Handbook (2nd Edition), Glossary (excerpt) (available at: http://water.epa.gov/scitech/swguidance/standards/upload/2002_06_11_standards_handbook_handbooktoc.pdf)

United States Environmental Protection Agency
Office of Water (4305)
EPA 823-B-94-005a
August 1994

EPA

Water Quality Standards Handbook:

Second Edition



"... to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

Section 101(a) of the Clean Water Act

Contains Update #1
August 1994

WATER QUALITY STANDARDS

HANDBOOK

SECOND EDITION

Water Quality Standards Branch
Office of Science and Technology
U.S. Environmental Protection Agency
Washington, DC 20460

September 1993

Contains update #1
August 1994

GLOSSARY

WATER QUALITY STANDARDS HANDBOOK

SECOND EDITION

"**Completely mixed condition**" is defined as no measurable difference in the concentration of a pollutant exists across a transect of the water body (e.g., does not vary by 5%) (USEPA, 1991a.)

"**Criteria**" are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use (40 CFR 131.3.)

"**Criteria continuous concentration**" **(CCC)** is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed indefinitely without causing unacceptable effect (USEPA, 1991a.)

"**Criteria maximum concentration**" **(CMC)** is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period of time without causing an acute effect (USEPA, 1991a.)

"**Critical life stage**" is the period of time in an organism's lifespan in which it is the most susceptible to adverse effects caused by exposure to toxicants, usually during early development (egg, embryo, larvae). Chronic toxicity tests are often run on critical life stages to replace long duration, life cycle tests since the most toxic effect usually occurs during the critical life stage (USEPA, 1991a.)

"**Critical species**" is a species that is commercially or recreationally important at the site, a species that exists at the site and is listed as threatened or endangered under section 4 of the Endangered Species Act, or a species for which there is evidence that the loss of the species from the site is likely to cause an unacceptable impact on a commercially or recreationally important species, a threatened or endangered species, the abundances of a variety of other species, or the structure or function of the community (USEPA, 1994a.)

"**Design flow**" is the flow used for steady-state waste load allocation modeling (USEPA, 1991a.)

"**Designated uses**" are those uses specified in water quality standards for each water body or segment whether or not they are being attained (40 CFR 131.3.)

"**Discharge length scale**" is the square root of the cross-sectional area of any discharge outlet (USEPA, 1991a.)

"**Diversity**" is the number and abundance of biological taxa in a specified location (USEPA, 1991a.)

"**Effective concentration**" **(EC)** is a point estimate of the toxicant concentration that would cause an observable adverse effect (such as death, immobilization, or serious incapacitation) in a given percentage of the test organisms (USEPA, 1991a.)

"**Existing uses**" are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards (40 CFR 131.3.)