

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

JOHN B. JONES, III; JULIE JONES;
LARRY WHITE; BANDON
WOODLANDS COMMUNITY
ASSOCIATION; OREGON COAST
ALLIANCE,

Plaintiffs-Appellants,

v.

NATIONAL MARINE FISHERIES
SERVICE; WILLIAM W. STELLE, JR.,
in his official capacity as Acting
Regional Administrator; UNITED
STATES ARMY CORPS OF ENGINEERS;
ROBERT L. VAN ANTWERP, JR.,
Chief of Engineers and Commanding
General,

Defendants-Appellees,

OREGON RESOURCES CORPORATION,
Intervenor-Defendant-Appellee.

No. 11-35954

D.C. No.
6:10-cv-06427-
HO

OPINION

Appeal from the United States District Court
for the District of Oregon
Michael R. Hogan, District Judge, Presiding

Argued and Submitted
November 6, 2013—Portland, Oregon

Filed December 20, 2013

Before: Arthur L. Alarcón, Milan D Smith, Jr.,
and Andrew D. Hurwitz, Circuit Judges.

Opinion by Judge Milan D. Smith, Jr.

SUMMARY*

Environmental Law

The panel affirmed the district court's summary judgment in favor of the United States Army Corps of Engineers in an action under the Clean Water Act and the National Environmental Policy Act challenging the Corps' issuance of a permit as part of a project to mine valuable mineral sands near Coos Bay, Oregon.

The panel held that the Corps complied with the National Environmental Policy Act because: the Corps properly considered the risks of hexavalent chromium generation; the Corps properly considered that the risk of hexavalent chromium generation did not warrant a full environmental impact statement; and the Corps properly declined to consider cumulative impacts of future chromium mining. The panel also held that the Corps' analysis of alternative sites and project designs did not violate the Clean Water Act.

* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

COUNSEL

Courtney Johnson (argued), and Christopher Winter, Crag Law Center, Portland, Oregon, for Plaintiffs-Appellants.

Maggie B. Smith (argued), Amanda Shafer Berman, Barbara M.R. Marvin, and Lane N. McFadden, Attorneys, Environmental & Natural Resources Division, United States Department of Justice, Washington, D.C., for Federal Defendants-Appellees.

Per Arnold Ramfjord (argued), Stoel Rives LLP, Portland, Oregon; Leonard J. Feldman and Jason T. Morgan, Stoel Rives LLP, Seattle, Washington; and Peter Davis Sax, Office of the United States Attorney, Tucson, Arizona, for Intervenor-Defendant-Appellee Oregon Resources Corporation.

OPINION

M. SMITH, Circuit Judge:

In 2008, Oregon Resources Corporation (ORC) applied for various state permits to mine valuable mineral sands from an area near Coos Bay, Oregon. ORC also applied for a permit from the Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA), 33 U.S.C. § 1344, because the project required filling in several acres of wetland. The Corps was required to comply with the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, as part of the permitting process. The Corps therefore prepared an Environmental Assessment (EA), and issued a “Finding of No Significant

Impact” (FONSI) in lieu of preparing a full Environmental Impact Statement (EIS), before ultimately issuing the requested Section 404 permit (ORC Section 404 Permit).

The Bandon Woodlands Community Association and other plaintiffs (collectively Woodlands) challenge several aspects of the EA and FONSI. Specifically, Woodlands claim that (1) the EA was deficient because it did not adequately examine the risks associated with the potential generation of toxic hexavalent chromium (Cr⁺⁶) as a result of the proposed mining; (2) the FONSI was arbitrary and capricious because of “significant uncertainty” surrounding the likelihood and impact of Cr⁺⁶ generation; and (3) the grant of the ORC Section 404 Permit was arbitrary and capricious because the Corps did not conduct an adequate “alternatives analysis.” We find Woodlands’ arguments without merit and affirm the district court’s grant of summary judgement to the Corps.

FACTUAL BACKGROUND AND PRIOR PROCEEDINGS

A. ORC’s Mining Project

ORC’s project involves mining naturally-occurring chromite, garnet, and zircon sands from four sites near Coos Bay, Oregon. The chromite and zircon sands are marketed to foundries for use in casting metal parts, while the garnet sands are sold for use in the water-jet cutting industry. The ORC Section 404 Permit covers four sites, called the South Seven Devils, North Seven Devils, West Bohemia, and West

Section 101 sites. These sites cover approximately 160 acres and are located on privately-owned timberlands.¹

ORC uses standard excavation equipment to remove topsoil covering the mineral sands. Topsoil is then stockpiled along the margins of the mining area, while mineral sands are loaded into trucks and transported to ORC's refining plant in Coos Bay. The refining plant uses a gravimetric process to separate out the marketable sand, which makes up roughly twenty-five percent of the sand transported from the mining sites. The remaining seventy-five percent of the sand is returned to the mine site.

As part of ORC's reclamation plan, each area is backfilled with the non-mineral sands returned from the processing plant, in addition to other material removed in the mining process. Each excavated area is then graded and replanted with trees. The reclamation process also involves the creation of new wetland areas pursuant to a mitigation plan. Mining has already been in process for several years, and the project will be completed in roughly three to six years.

B. The Permitting Process

ORC submitted a Section 404 permit application to the Corps on May 8, 2008. The Corps' decision to grant a Section 404 permit is subject to the requirements of both the NEPA and the Endangered Species Act (ESA), 16 U.S.C. § 1531 *et seq.*, the latter of which requires the Corps to consult with the National Marine Fisheries Service (NMFS). Additionally, ORC was required to obtain approvals from a

¹ Two other sites, Section 33 and Shepard, were withdrawn from the application by ORC.

number of state agencies, including the Oregon Department of Geology and Minerals Industry (DOGAMI), the Oregon Department of State Lands, and the Oregon Department of Environmental Quality (DEQ). DEQ has jurisdiction over state water quality standards pursuant to Section 401 of the CWA. The state and federal agencies coordinated the permitting process in this case and provided technical support to one another.

Shortly after ORC filed its permit application, the Corps contacted NMFS to begin informal consultation under the CWA. Over the next two years, the Corps and NMFS gathered information about the project and its potential impacts. The Corps and NMFS conducted site visits, held public and private meetings, evaluated information provided by stakeholders, including Woodlands, and coordinated with state agencies.

Eventually, the Corps issued an EA discussing the potential environmental impacts of ORC's mining project. The EA concluded that the project would not have a significant effect on the human environment, and, accordingly, the Corps issued a FONSI. Because it issued a FONSI, the Corps did not prepare an EIS. The NMFS issued a letter of concurrence with the EA, and ORC received all necessary state permits, including a Section 401 water quality certification from the DEQ.

1. Hexavalent Chromium Generation

In its NEPA analysis, the Corps considered the potential for increased Cr⁺⁶ generation from the proposed mining. Woodlands' public comments on the permit application noted that the chromite sands ORC planned to mine contained

benign trivalent chromium (Cr^{+3}), which can oxidize into toxic Cr^{+6} in the presence of manganese oxide, which is also present at the sites. Woodlands was concerned that ORC's mining project could lead to increased Cr^{+6} generation, which could, in turn, contaminate ground and surface water. Woodlands submitted expert reports that recommended, among other things, ongoing monitoring during the mining process to ensure that the amount of Cr^{+6} did not increase.

ORC responded to Woodlands' comments and expert reports in a Biological Assessment (BA). The BA suggested that the risk of Cr^{+6} generation was minimal, because

- The geology of the mining area did not indicate that chromite sands would react with manganese oxide to form Cr^{+6} . Groundwater sampling demonstrated that the existing levels of Cr^{+6} in groundwater at the mining sites was significantly below safe drinking limits.
- Eh and pH levels at the sites were not conducive to the oxidization of either chromium or manganese, which is necessary for the formation of Cr^{+6} .
- The mining sites contained naturally occurring substances that would facilitate conversion of Cr^{+6} back into Cr^{+3} (Cr^{+6} attenuation).
- Mining would remove the chromite sands necessary to form Cr^{+6} and would facilitate reactions with other substances likely to result in Cr^{+6} attenuation.

- ORC's planned monitoring regime could detect any increased concentration of Cr⁺⁶, allowing ORC and the DEQ to respond.

In addition, the Corps and NMFS requested independent technical support from William Mason, a Registered Geologist with the DEQ. Mason examined the information provided by ORC and Woodlands, along with academic literature regarding Cr⁺⁶ generation, and summarized his findings in a memorandum (Mason Memorandum). The Mason Memorandum noted that the conditions at the mining sites favored Cr⁺⁶ attenuation rather than generation. The Mason Memorandum also noted that conditions at ORC's proposed mining sites were similar to those present in some academic studies that found significant Cr⁺⁶ attenuation, but that the findings of such studies are not necessarily applicable to sites not considered by those studies due to the complex nature of subsurface geochemical reactions. The Mason Memorandum concluded that "it is possible that [Cr⁺⁶] could be generated in a post-mining environment, but it appears unlikely given the aquifer's apparent potential for [Cr⁺⁶ attenuation]." Finally, the Mason Memorandum offered a number of "recommendations" related to ongoing monitoring after mining commenced.

As a result of these recommendations, DOGAMI notified the Corps that it would require ongoing Cr⁺⁶ monitoring as part of ORC's permit from that agency, and explained that it would require suspension of mining and/or other measures if the monitoring showed an increase in Cr⁺⁶ levels. The ORC Section 404 Permit issued by the Corps required ORC to comply with all conditions of the DEQ and DOGAMI permits. Based on this information from the DEQ and DOGAMI, the Corps concluded that the risks associated with

the generation of Cr⁺⁶ would not “have a significant impact on the quality of the human environment.”

2. Cumulative Impact Analysis

In addition to examining the potential for Cr⁺⁶ generation, the Corps considered the possibility that ORC would engage in future mining beyond the sites included in the Section 404 permit application, noting that ORC had suggested that it intended to mine for mineral sands along the Oregon coast “from Cape Arago to Port Orford.” The EA also noted that ORC had removed from the Section 404 permit application two sites that had already been surveyed, one of which, Section 33, had already been granted a mining permit by DOGAMI.

The record also reflects, however, significant challenges to developing any of the mining sites that had been identified by ORC. Specifically:

- The Section 33 site would require the construction of a costly one-mile-long access road across private property that itself would have involved potentially insurmountable permitting and leasing challenges.
- The Shepard site also would have required construction of an additional haul road or the reversal of a prior Coos County land use decision barring the use of an existing road.
- The Westbrook site was not owned by ORC and was encumbered by a mineral reservation in favor of another company.

Accordingly, the Corps declined to examine the cumulative impact of mineral sands mining along the Oregon Coast, noting that it would consider the impacts of future projects if permits were sought for them.

3. Analysis of Practicable Alternatives

The Corps also considered whether there were practical alternatives to the ORC's proposed sites that would have less impact on the aquatic environment. ORC initially provided an alternatives analysis as part of its permit application. The Corps requested additional information regarding the alternative sites or project designs that ORC provided. ORC also provided information on its overall project purpose and the absence of alternative sites outside Oregon. After a meeting with the Corps, ORC submitted an additional detailed analysis regarding the unique nature of the chromite sands at the proposed mining sites, as well as the reasons ORC had included those sites in its proposal. The Corps pressed ORC regarding its decision not to use the Shepard, Section 33, or Westbrook sites, and ORC responded with a number of reasons for the decision, including the existence of significant logistical hurdles at each of those sites.

Ultimately, the Corps considered a "no build alternative (do not mine), a subsurface alternative that would conduct mining beneath the wetlands . . . , only mine areas that do not contain wetlands (mine uplands) and to mine all proposed areas and provide compensatory mitigation for wetland impacts." Additionally, the Corps considered "Smaller Project Designs," consisting of some combination of sites other than the North Seven Devils location. The Corps rejected these "smaller designs" because "[a] project of a smaller scale than the four proposed mine sites, although it

may be practicable, will not provide the required quantity of chromite necessary to achieve the overall purpose.” The Corps also considered and rejected “Larger Project Designs,” “Different Project Designs,” “Other Sites Available to the Applicant,” and “Other Sites Not Available to the Applicant.”

C. Prior Proceedings

Woodlands filed this action in the Western District of Washington on October 12, 2010. The case was transferred to the District of Oregon on December 12, 2010. Woodlands sought a temporary restraining order and a preliminary injunction, both of which the district court denied. Woodlands then unsuccessfully sought an emergency injunction pending its appeal of the district court’s denial of the preliminary injunction. After our rejection of the emergency injunction, Woodlands withdrew its appeal of the preliminary injunction and the parties filed joint motions for summary judgment. The district court granted summary judgment to the Corps, finding that it had complied with all of its statutory obligations. Woodlands timely appealed.

JURISDICTION AND STANDARD OF REVIEW

We have jurisdiction under 28 U.S.C. § 1291 and review the district court’s grant of summary judgment *de novo*. *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006).

We review the Corps’ decisions under the APA’s arbitrary and capricious standard. 5 U.S.C. § 706(2)(A). This standard is deferential, and we cannot vacate those decisions unless the agency “has relied on factors which Congress had not intended it to consider, entirely failed to

consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it would not be ascribed to a difference in view or the product of agency expertise.” *Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 658 (2007) (internal quotations omitted).

DISCUSSION

I. Regulatory Framework

Woodlands challenges the Corps’ decision to issue the ORC Section 404 Permit under two environmental statutes, the CWA and NEPA.

A. Clean Water Act

The CWA prohibits unauthorized discharge of any pollutant into waters of the United States. Section 404 of the CWA authorizes the Corps to issue permits for discharge of dredged or fill material into “navigable waters.” 33 U.S.C. § 1344(a). The “Section 404(b)(1) Guidelines,” developed by the EPA, govern the Section 404 permit process in conjunction with regulations issued by the Corps. 40 C.F.R. § 230 *et seq.* (the Guidelines); 33 C.F.R. § 323 *et seq.* (Corps’ regulations).

Generally, the Corps is prohibited from permitting discharges under Section 404 where there “is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. § 230.10(a).

Practicable alternatives must be “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose.” 40 C.F.R. § 230.10(a)(2).

The CWA provides for a shared enforcement regime between federal and state agencies. *PUD No. 1 of Jefferson Cnty. v. Wash. Dep't of Ecology*, 511 U.S. 700, 704 (1994) (“[T]he Clean Water Act establishes distinct roles for the Federal and State Governments.”). States with approved programs take over responsibility for enforcing water quality standards within their borders. 33 U.S.C. § 1319(a). “In addition to these primary enforcement responsibilities, § 401 of the Act requires States to provide a water quality certification before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters.” *PUD No. 1*, 511 U.S. at 707 (citing 33 U.S.C. § 1341). A state’s certification of compliance under Section 401 is “conclusive with respect to water quality considerations,” unless the EPA advises otherwise. 33 C.F.R. § 320.4; *Bering Strait Citizens for Responsible Res. Develop. v. U.S. Army Corps of Eng'rs*, 524 F.3d 938, 949–50 (9th Cir. 2008). Oregon has had an approved state program since 1973. 39 Fed. Reg. 26,061 (July 16, 1974); *Boise Cascade Corp. v. EPA*, 942 F.2d 1427, 1430 (9th Cir. 1991).

B. National Environmental Policy Act

NEPA “provides the necessary process to ensure that federal agencies take a hard look at the environmental consequences of their actions.” *Neighbors of Cuddy Mountain v. Alexander*, 303 F.3d 1059, 1070 (9th Cir. 2002) (citations omitted). NEPA requires that agencies prepare an EIS for any proposed agency action “significantly affecting

the quality of the human environment.” 42 U.S.C. § 4332(C). The Council on Environmental Quality (CEQ) has promulgated regulations to guide federal agencies in determining what actions are subject to that statutory requirement. *See* 40 C.F.R. § 1500.3. The CEQ regulations allow an agency to prepare a more limited document, an environmental assessment, or EA. The EA is a “concise public document” that “[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an [EIS].” 40 C.F.R. § 1508.9(a). If an EA determines that agency actions will not have a significant effect on the human environment, the agency must issue a FONSI. *See* 40 C.F.R. §§ 1501.4(e), 1508.13. Where the effects on the human environment are “highly uncertain or involve unique or unknown risks,” however, the agency must prepare an EIS. 40 C.F.R. § 1508.27(b)(5).

If the Corps failed to comply with NEPA, Woodlands may be entitled to an injunction blocking any future mining pending satisfactory NEPA review, even though the project is underway. *See West v. Sec’y of Dep’t of Transp.*, 206 F.3d 920, 925 (9th Cir. 2000) (“[A]lthough Stage 1 of the interchange project is complete, and the new interchange is carrying traffic . . . , upon finding that defendants failed to comply with NEPA, our remedial powers would include remanding for additional environmental review and, conceivably, ordering the interchange closed or taken down.”); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998) (“The injunction issued by this Court on November 5, 1998 [enjoining future logging, road building, or other ground disturbing activities in the permit area] . . . shall remain in full force and effect until the Forest Service satisfies its NEPA obligations.”).

II. The Corps Complied With NEPA

Woodlands argues that the Corps failed to comply with NEPA because (1) contrary to NEPA regulations, the EA “contains only narratives of expert opinions,” *Klamath-Siskiyou Wildlands v. BLM*, 387 F.3d 989, 996 (9th Cir. 2004) (citations omitted); (2) the uncertainty surrounding Cr⁺⁶ generation rendered the FONSI arbitrary and capricious; and (3) the Corps’ failure to consider the environmental impacts of widespread mineral sands mining was arbitrary and capricious. We reject Woodlands’ arguments.

A. The Corps Properly Considered the Risks of Hexavalent Chromium Generation

“NEPA documents are inadequate if they contain only narratives of expert opinions.” *Klamath-Siskiyou*, 387 F.3d at 996. “[A]llowing the [Agencies] to rely on expert opinion without hard data either vitiates a plaintiff’s ability to challenge an agency action or results in the courts second guessing an agency’s scientific conclusions. As both of these results are unacceptable, we conclude that NEPA requires that the public receive the underlying environmental data from which [an Agency] expert derived her opinion.” *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1150 (9th Cir. 1998). In both *Klamath* and *Sporting Congress*, the EAs “fail[ed] to provide the public with a basis for evaluating the impact of the [agency action]” because they did not include data that would permit the public to evaluate the agency decisions. *Idaho Sporting Cong.*, 137 F.3d at 1150. Woodlands contends that the EA is deficient for the same reasons.

Woodlands' argument, however, ignores that an agency may incorporate data underlying an EA by reference. *See City of Sausalito v. O'Neill*, 386 F.3d 1186, 1214 (9th Cir. 2004) (quoting 40 C.F.R. § 1502.21). Here, the Corps did just that. The EA cited to publically-available data provided by ORC and discussed in the Mason Memorandum. The Mason Memorandum, a thorough study of the issues surrounding Cr⁺⁶ generation, includes data from numerous test wells drilled at the mining sites, as well as a review of academic literature related to Cr⁺⁶ generation and attenuation. That is all NEPA requires, and the EA was thus not deficient as were those at issue in Klamath or *Sporting Congress*. *See Bering Strait Citizens for Responsible Res. Dev. v. U.S. Army Corps of Eng'rs*, 524 F.3d 938, 956 (9th Cir. 2008) ("BSC argues that the Corps did not adequately consider the environmental impacts of the Rock Creek Mine Project in the EA This is incorrect The Environmental Information Document, incorporated by reference in the EA, also includes specific data on the air quality issues at the site, and concludes that there are none that are significant.").

B. The Corps Properly Concluded that the Risk of Hexavalent Chromium Generation did not Warrant a Full Environmental Impact Statement.

Woodlands next argues that significant uncertainty as to the likelihood and effect of Cr⁺⁶ generation renders the Corps' FONSI and subsequent failure to prepare an EIS arbitrary and capricious. Although uncertainty is inherent in any environmental decision, an EIS is not required "anytime there is some uncertainty, but only [where] the effects of the project are highly uncertain." *Ctr. For Biological Diversity v. Kempthorne*, 588 F.3d 701, 712 (9th Cir. 2009) (internal quotations omitted).

Here, three separate agencies examined ORC's project and concluded that the risk of Cr⁺⁶ generation was minimal for two primary reasons: (1) There was no causal mechanism that would lead to increased Cr⁺⁶; and (2) the chemical makeup of the site favored Cr⁺⁶ attenuation rather than Cr⁺⁶ generation. Woodlands, however, argues that the Mason Memorandum established that a lack of site specific data rendered any conclusions regarding Cr⁺⁶ generation highly uncertain and that this uncertainty required the Corps to conduct a full EIS before granting the Section 404 Permit. *See Nat'l Parks and Conservation Ass'n v. Babbitt*, 241 F.3d 722, 732 (9th Cir. 2001). We disagree.

The Mason Memorandum, incorporated into the EA, concluded that:

After carefully reviewing the BWCA and ORC submittals and a number of journal articles describing the fate and transport of chromium species, I feel that it is possible that hexavalent chromium could be generated in a post-mining environment, but it appears unlikely to be significant given the aquifer's apparent potential to reduce Cr⁺⁶ to Cr⁺³ (i.e., presence of natural reductants such as iron, manganese, and organic matter). This conclusion, however, should be confirmed with easy and cost-effective field studies that can help quantify the attenuation capacity at a particular site.

Citing the final sentence of this conclusion, Woodlands argues that the Mason Memorandum recognized "substantial uncertainty" surrounding issues of Cr⁺⁶ generation and

attenuation and called for further studies to reduce that uncertainty. In context, however, it is clear that the Mason Memorandum does not support such a reading.

The Mason Memorandum noted that, although data from the ORC drilling surveys is similar to sites with high attenuation capacities, “due to the complex geochemical nature of chromium in the subsurface, experimental field studies are too site-specific and not transferrable between sites.” The Memorandum further notes that “although it is possible to identify and quantify specific Cr⁺⁶ attenuation processes or factors in pure or simple systems (as in lab studies), [academics] recommend instituting a long-term site-specific monitoring of aqueous geochemical parameters to detect sudden changes in the system that could lead to mobilization of Cr⁺⁶. ”

The Mason Memorandum also contains a “Recommendations” section, immediately following the “Conclusions” section upon which Woodlands relies. There, Mason listed a number of recommendations, including: (1) continuing the groundwater monitoring program (including baseline monitoring) until mining has ceased and reclamation has been successfully complete; (2) analyzing groundwater samples for Cr⁺⁶ using a more current method; (3) adding geochemical sampling parameters to the monitoring regime; (4) adding a contingency to the ORC monitoring plan under the DOGAMI permit to expand the groundwater monitoring network and/or add surface water sampling stations if changes in the system appear to begin favoring the generation of Cr⁺⁶; and (5) add remedial action contingencies to the permit in the event that the mining appears to be causing metals to migrate toward surface water in concentrations that could pose a threat to ecological receptors. These

recommendations were incorporated into the DOGAMI permit.

In context, it is clear that the Mason Memorandum established that Cr⁺⁶ generation is unlikely to occur at the site. Rather than recommending additional studies in order to address remaining uncertainty, the Mason Memorandum made clear that the site specific nature of Cr⁺⁶ attenuation means that the only way to ensure that Cr⁺⁶ does not reach harmful levels is to monitor how Cr⁺⁶ behaves once mining begins. The DEQ conclusion thus does not, as Woodlands claims, suggest that additional studies prior to mining was needed to resolve any remaining uncertainty with respect to Cr⁺⁶ generation. Rather, the Mason Memorandum concluded that the risk of Cr⁺⁶ generation is minimal, and recommended monitoring to account for any site specific variation that might become apparent once mining began.

Woodlands also argues that it was inappropriate for the Corps to “rely on monitoring [in] dismiss[ing] potential impacts.” The Corps cannot rely on monitoring and mitigation alone in reaching a FONSI. *See N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1084–85 (9th Cir. 2011). This argument, however, misrepresents the role of monitoring in the Corps’ decision here.

In *Northern Plains*, the Bureau of Land Management (BLM) informed the Surface Transportation Board (Board) that there was insufficient data regarding the effects of the proposed project on sage grouse. *Id.* at 1084. In response, the Board proposed to conduct sage grouse surveys during the project’s operation, as well as proposing “pre-construction surveys” to determine the extent of sage grouse habitat in the project area. *Id.* We concluded that the Board’s actions were

arbitrary and capricious because (1) without data on sage grouse populations the agency could not carefully consider whether the project would have a significant environmental impact and (2) the lack of data available to the public during the EIS process deprived citizens of the opportunity to participate in the decision-making process. *Id.* at 1085.

Here, by contrast, the Corps, relying in part on the Mason Memorandum, concluded that Cr⁺⁶ generation due to ORC's mining project was *unlikely* given the site conditions. The Mason Memorandum also noted that, because of the site specific nature of Cr⁺⁶ attenuation, academic literature recommends long term monitoring of a site in order to ensure that conditions do not change. Monitoring thus does not serve to dismiss the risk of Cr⁺⁶ generation, or to obtain data necessary to make a well informed environmental impact analysis, but merely to confirm that Cr⁺⁶ generation is behaving as the site conditions suggest that it will. This data is thus not required for the Corps to make an informed decision regarding significant environmental impacts as was the case in *Northern Plains*, nor is it relevant to public participation in the decision-making process. *Id.*

Further, the Section 401 Certification issued by DEQ contains mitigation measures, including the suspension of mining activities. These measures will serve to identify any unexpected increased Cr⁺⁶ generation and to halt mining (the potential cause of such increased Cr⁺⁶) until the problem is addressed. The Corps is, to this extent, entitled to rely on mitigation measures pursuant to state permits. *See Friends of the Payette v. Horseshoe Bend Hydroelec. Co.*, 988 F.2d 989, 993 (9th Cir. 1993).

C. The Corps Properly Declined to Consider Cumulative Impacts of Future Chromium Mining

NEPA requires an agency to consider the cumulative impacts of a project. 40 C.F.R. § 1508.27(b)(7). NEPA's implementing regulations define "cumulative impacts" as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. An agency need only consider "[t]he cumulative effects of projects that [the applicant] is already proposing." *Lands Council v. Powell*, 395 F.3d 1019, 1023 (9th Cir. 2005). "For any project that is not yet proposed, and is more remote in time," by contrast, "a cumulative effects analysis would be both speculative and premature." *Id.*

Woodlands argues that the Corps failed to analyze the cumulative impacts of ORC's mining project, pointing to ORC's plans to widen the scope of mining in the future. But, the majority of these plans are speculative and have not been reduced to specific proposals. Woodlands also claims that the three alternative sites considered in the EA as possible future projects require the Corps to perform a cumulative impact analysis.

In *Northern Plains*, we determined that the Board's decision to consider only five years of cumulative impacts was arbitrary and capricious. *N. Plains*, 668 F.3d at 1079. Our decision was based on the fact that the BLM had previously prepared an EIS that projected the growth of mining activity over the next 20 years. *Id.* at 1078–79. In light of this study, we found that projects outside of the five year time frame were "reasonably foreseeable," and that the

Board's failure to analyze the cumulative effects of these projects was arbitrary and capricious. *Id.* at 1079.

Here, by contrast, there is no reliable study or projection of future mining in this case. ORC's general statements regarding a desire for increased mining give no information as to the scope or location of any future projects or even how many such projects ORC contemplates pursuing. The general plans for expanded mining recited by Woodlands thus do not require a cumulative impacts analysis. *See id.*; *Env'tl. Protect. Info. Ctr. v. Forest Serv. (EPIC)*, 452 F.3d 1005, 1014 (9th Cir. 2006).

The three sites excluded from the application, Section 33, Shepard, and Westbrook, all face significant logistical hurdles to development. The Section 33 site would have required the construction of a costly access road across private property that would have involved potentially insurmountable permitting and leasing challenges. The Shepard site also would have required construction of an additional haul road, or the reversal of a prior Coos County land use decision barring the use of an existing road. The Westbrook site was not owned by ORC, and was encumbered by a mineral reservation in favor of another company that would have made it economically infeasible to mine. It was thus unclear whether ORC will pursue mining these sites at all, much less whether ORC had developed an actual plan or proposal that was sufficiently well-defined to "permit meaningful consideration." *EPIC*, 451 F.3d at 1014. Under these circumstances, the Corps was not required to consider the cumulative impact of speculative widespread mining for mineral sands on the Oregon coast. *Id.*

III. The Corps' Alternative Analysis did not Violate the CWA

The CWA requires the Corps to conduct an analysis of alternative sites and project designs. *Bering Strait*, 524 F.3d at 947. Woodlands alleges several deficiencies with the alternatives analysis conducted in this case: (1) that the "Smaller Project Design" considered by the Corps was actually larger than the proposed project; and (2) that the Corps improperly considered ORC's financing requirements as part of its alternatives analysis.

Woodlands' contention that the Corps failed to consider smaller designs is simply incorrect. The EA notes that mining any of the parcels in isolation would not be practicable because they each contain insufficient chromium to meet the project's needs. Woodlands' two arguments thus collapse into the question of whether the Corps erred by considering the quantity of chromium that ORC needed to mine in order to meet its financing obligations.

An alternative is practicable if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." 40 C.F.R. § 230.10(a)(2). An agency may consider a project's economic requirements in order to determine whether alternative sites are practicable. *Sylvester v. U.S. Army Corps of Eng'rs*, 882 F.2d 407, 409 (9th Cir. 1989); *Nw. Env'tl. Defense Ctr. v. Wood*, 947 F. Supp. 1371, 1377 (D. Or. 1996), *aff'd*, 97 F.3d 1460 (9th Cir. 1996); *see also City of Shoreacres v. Waterworth*, 420 F.3d 440, 448 (5th Cir. 2005) (noting that a site was not logistically possible because funds from the bond issued to fund the project could not be expended in the proposed alternative site).

In order to conduct a practicable alternatives test, the Corps must first determine the “overall project purposes.” 40 C.F.R. § 230.10(a)(2). Although the Corps may not manipulate the project purpose so as to exclude alternative sites, “the Corps has a duty to take into account the objectives of the applicant’s project.” *Sylvester*, 882 F.2d at 409.

The project purpose here is to “obtain specific minerals . . . to support foundry and water-jet cutting industry needs in national and world markets.” In order to obtain the minerals, ORC must not only mine the mineral-rich sands, but also extract the chromite. Accordingly, in order for the project to meet its purpose, ORC must extract sufficient resources to support that type of mining activity. Logically, no one would seek financing to build a refining facility if it were not possible to extract a sufficient quantity of minerals to make the project profitable. *See Waterworth*, 420 F.3d at 448. Accordingly, the Corps did not err in rejecting the individual sites because such sites would not provide a sufficient quantity of chromite to meet the project’s purpose.

AFFIRMED.