126 FERC ¶ 61,035
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Bradwood Landing LLC	Docket No. CP06-365-002
NorthernStar Energy LLC	Docket Nos. CP06-366-002 CP06-376-002 CP06-377-002

ORDER DENYING REHEARING

(Issued January 15, 2009)

1. On September 18, 2008, the Commission issued an order in this proceeding authorizing Bradwood Landing, LLC under section 3 of the Natural Gas Act (NGA) to site, construct and operate a liquefied natural gas (LNG) import terminal on the Columbia River at Bradwood in Clatsop County, Oregon.[1] The Commission also issued a certificate of public convenience and necessity to NorthernStar Energy LLC, an affiliate of Bradwood Landing LLC,[2] under section 7 of the NGA to construct, own and operate approximately 36.3 miles of pipeline commencing at the outlet of the terminal and traversing Clatsop and Columbia Counties, Oregon and terminating in Cowlitz County, Washington, at an interconnection with the Northwest Pipeline Corporation (Northwest) interstate pipeline system north of Kelso, Washington.[3] The Bradwood Project is designed to have a natural gas peak sendout capacity of 1.3 billion cubic feet per day (Bcf/d). Construction and ultimate operation pursuant to the September 18 Order's

[1] *Bradwood Landing LLC and NorthernStar Energy LLC*, 124 FERC ¶ 61,257 (2008) (September 18 Order).

[2] NorthernStar Energy, LLC and Bradwood Landing LLC will be referred to jointly as NorthernStar.

[3] The LNG terminal, pipeline and project will be referred to herein, respectively, as the Bradwood Terminal, Bradwood Pipeline and Bradwood Project.

authorizations are subject to the Bradwood Project fulfilling 109 environmental conditions.

2. Requests for rehearing of the September 18 Order were filed by the State of Oregon (Oregon);[4] Columbia Riverkeeper, Sierra Club, Landowners and Citizens for a Safe Community, Wahkiakum Friends of the River, Willapa Hills Audubon Society and Gayle Kiser (collectively Riverkeeper); the Nez Perce Tribe and the Columbia River Inter-Tribal Fish Commission[5] (collectively Tribes);[6] National Marine Fisheries Service (NMFS); and the State of Washington Department of Ecology (Ecology). The numerous issues raised generally concern the adequacy of the Commission's environmental review of the Bradwood Project. The Commission will deny rehearing of the September 18 Order for the reasons discussed below.

I. Background

3. The September 18 Order authorized NorthernStar to site, construct and operate the Bradwood LNG receiving terminal under section 3 of the NGA. As approved, the Bradwood Terminal will be located at the former town site of Bradwood, in Clatsop County and will occupy about 40 acres of land within a 411-acre site controlled by NorthernStar. The Bradwood Terminal will consists of a single marine berth capable of receiving and unloading up to 125 LNG tankers per year with capacities ranging from 100,000 cubic meters (m^3) up to 200,000 m^3; three unloading arms at the berth to transfer LNG from the carriers to the storage tanks and a fourth vapor return arm to flow LNG

[4] Oregon is acting by and through the Oregon Department of Energy (ODOE), the Oregon Department of Environmental Quality (Oregon DEQ) and the Oregon Department of Land Conservation and Development (ODLCD).

[5] The Columbia River Inter-tribal Fish Commission (Inter-tribal Commission) was formed by the four Columbia River treaty tribes: the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Yakama Nation. The fish and wildlife committees of these tribes govern the Inter-Tribal Commission.

[6] We note that the Tribes' rehearing request included two of the four members of the Inter-tribal Commission as individual parties seeking rehearing: the Nez Perce Tribe, as stated, and the CTUIR. While the Nez Perce Tribe filed a timely motion to intervene in this proceeding separately from the Inter-tribal Commission and is thus an intervenor in its own right, the CTUIR did not. We also note that, after issuance of the September 18 Order, the CTUIR filed a late motion to intervene which, as discussed in Section II.A. of this order, the Commission is denying. We will, therefore, dismiss the CTUIR's request for rehearing.

vapor to the tanker to compensate for displacement to the tanker during the unloading process; two insulated LNG storage tanks with a net tank capacity of 160,000 m^3; seven submerged combustion vaporizers to regasify the LNG for sendout; and various buildings and systems for the purposes of safety, security, control, storage and maintenance. NorthernStar plans to dredge about 46 acres within a 58-acre area in the Columbia River to create a ship maneuvering area for the terminal berth. LNG marine traffic will enter the Columbia River at the Pacific Coast and then travel approximately 38 miles inland to the LNG terminal. The Bradwood Terminal will provide up to 1.3 Bcf/d of natural gas to the region.

4. The September 18 Order also authorized NorthernStar, under section 7(c) of the NGA, to construct, own and operate the Bradwood Pipeline, an approximately 36.3-mile long pipeline consisting of 36-inch diameter pipeline for the first 18.9 miles and 30-inch diameter pipeline for the remaining 17.4 miles. The Bradwood Pipeline will originate within the Bradwood Terminal and will terminate at an interconnection with Northwest's interstate system. Along the route, the pipeline also will interconnect with Northwest Natural Gas Company's (NW Natural) intrastate pipeline system, providing access to NW Natural's Mist underground natural gas storage facility, and have delivery points at Georgia-Pacific's paper mill at Wauna, Oregon, and Portland General Electric's (PG) Beaver Power Plant at Port Westward, Oregon.

5. The September 18 Order granted the requested authorizations subject to conditions. The Commission recognized that there was considerable opposition to the project but found that, with the adoption of the proposed mitigation measures contained in the final Environmental Impact Statement (final EIS) prepared for the project, construction of the project would result in limited adverse environmental impacts. The Commission also concluded that the project is needed to meet the projected energy needs of the Pacific Northwest.

Environmental Analysis

6. Commission staff evaluated the potential environmental impacts of the proposed Bradwood Project in draft and final EISs that satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA).[7] The U.S. Army Corps of Engineers (COE), U.S. Coast Guard (Coast Guard), and U.S. Department of Transportation (DOT) served as cooperating agencies in the preparation of the draft and final EISs. Over the course of the environmental review, prior to the issuance of the final EIS, staff participated in 33 meetings with the public and agencies to identify and resolve concerns with the project.

[7] 42 U.S.C. §§ 4321-4347.

7. On August 17, 2007, we issued a draft EIS. The Notice of Availability for the draft EIS, published in the *Federal Register* on August 24, 2007, established a 120-day comment period. About 1,200 copies of the draft EIS were sent to interested parties, including elected officials, and federal, state, and local government agencies; parties to the proceeding; affected landowners; Indian tribes and Native American organizations; local libraries and newspapers; and non-governmental organizations, environmental and public interest groups, and individuals who requested a copy of the draft EIS. Staff held six public meetings in the project area to take comments on the draft EIS.

8. On June 6, 2008, we issued the final EIS. Public notice of the availability of the final EIS was published in the *Federal Register* on June 13, 2008. Copies of the final EIS were mailed to the same parties as the draft EIS, as well as to parties that commented on the draft EIS.

9. The final EIS considered the relevant environmental and safety issues associated with this project and concluded that, with the implementation of NorthernStar's proposed mitigation measures and the additional measures recommended by staff, the construction and operation of the Bradwood Project would result in limited adverse environmental impact and would be an environmentally acceptable action (final EIS ES-9).

II. Procedural Issues

A. Late Interventions

10. CTUIR and Energy Action Northwest (Energy Action NW) filed motions for late intervention. CTUIR states that its tribal interest in anadromous and other fish resources of the Columbia River are secured and derived from the Treaty of 1855 between CTUIR and the United States.[8] Energy Action NW states that it is a non-profit organization formed in August 2008 by local businesses which use natural gas in their facilities, labor organizations whose members are employed constructing and operating new energy infrastructure projects, and other individuals in Oregon and Washington. Energy Action NW does not list its specific members.

11. CTUIR asserts that it actively co-manages fishery resources with federal and state authorities. It notes that it has monitored the progress of the Bradwood Project since its inception, including participating in multiple meetings and other communications with NorthernStar, but did not formally intervene during the initial notice period. However, CTUIR states that it has lately come to recognize that the Bradwood Project may significantly and adversely affect its Tribal treaty rights and interests, partly because of the numerous submissions made to the Commission subsequent to the final EIS that have

[8] Treaty of June 9, 1855; 12 Stat 957 (1855).

raised new and additional concerns regarding the impacts of the Bradwood Project on tribal treaty resources, including a newly-issued scientific study.[9] CTUIR states no other party can adequately represent its interest and submits that granting it party status at this late date will not disrupt, delay or prejudice other parties to this proceeding because it does not seek to introduce new evidence at this time and agrees to accept the record as developed.

12. Energy Action NW states that it was formed in August 2008 for the express purpose of giving its members a voice in policy disputes regarding new energy infrastructure, including LNG terminals that would give the region access to new natural gas supplies. Energy Action NW states that new quantities of natural gas will help relieve the prices manufacturers will pay for both natural gas and electricity, lower electricity prices in general, and create employment opportunities for union members. Energy Action NW submits that no current party represents the same breadth of its interest. It explains that it could not have intervened in timely fashion in 2006 because the first meeting of its Board of Directors took place in August 2008 but that it intervened as promptly as practical. Energy Action NW states that its intervention will not delay or prejudice any party because it is willing to accept the record developed in this proceeding as it stands and there are already numerous parties to this proceeding.

Commission Response

13. When considering a motion for late intervention, the regulations provide that the Commission may consider whether: (1) the movant has good cause for failing to file the motion within the time prescribed; (2) any disruption of the proceeding might result from permitting the intervention; (3) the movant's interest is not adequately represented by other parties in the proceeding; (4) any prejudice to, or additional burdens upon, the existing parties might result from permitting the intervention; and (5) the motion describes in adequate detail the movant's interest in and right to participate in the proceeding.[10]

14. In considering requests for late interventions, the Commission typically finds that granting late intervention at the early stages of natural gas certificate proceedings will neither disrupt the proceedings nor prejudice the interests of any other party. Thus, the Commission liberally allows late interventions at the early stages and is more restrictive as the proceedings near their conclusion.[11] When late intervention is sought after the

[9] *Citing* Bottom, D, et al., *Salmon Life Histories, Habitat, and Food Webs in the Columbia River Estuary; An Overview of Research Results 2002-2006,* NOAA (2008).

[10] 18 C.F.R. § 385.214 (2008).

[11] *See Stingray Pipeline Co.*, 66 FERC ¶ 61,202 (1994).

issuance of a dispositive order, burdens on other parties may be substantial and the movants bear a higher burden to demonstrate good cause for granting such late intervention.[12] The size and the resources available to the intervener may be taken into consideration. The Commission is less forgiving of the failure of a sophisticated company with a regulatory affairs department to intervene as soon as it has notice of a proceeding,[13] than of individuals or organizations which may not have access to legal counsel or the knowledge to meet the Commission's procedural requirements.[14]

15. We find that CTUIR and Energy Action NW have not shown good cause to grant their motions to intervene at this late stage of the proceeding. The Commission expects parties to intervene in a timely manner based on the reasonably foreseeable issues arising from the applicant's filings and the Commission's notice of proceedings.[15] The Commission has previously explained that "[a] key purpose of the intervention deadline is to determine, early on, who the interested parties are and what information and arguments they can bring to bear. Interested parties are not entitled to hold back awaiting the outcome of the proceeding, or to intervene when events take a turn not to their liking."[16] Allowing late intervention at this point in the proceeding brings very little benefit to the proceeding and potentially would create prejudice and additional burdens on the Commission, other parties, and the applicants.

16. We note that CTUIR is a member of the Inter-Tribal Commission which filed a timely motion to intervene on July 6, 2006 and, with the Nez Perce Tribe and CTUIR, filed a request for rehearing of the September 18 Order. Since we are denying CTUIR's

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[12] *See, e.g., ISO New England Inc.*, 124 FERC ¶ 61,096 (2008); *PJM Interconnection L.L.C.*, 122 FERC ¶ 61,082 (2008); *see also Black Marlin Pipeline Co.*, 67 FERC ¶ 61,205 (1994)(late intervention denied when other parties had already participated in complex settlement negotiations); *Enron Gulf Coast Gathering, L.P.*, 97 FERC ¶ 61,001 (2001)(late interventions filed after rehearing order issued).

[13] *See Black Marlin*, 67 FERC ¶ 61,205.

[14] *Tennessee Gas Pipeline Co.*, 52 FERC ¶ 61,290 (1990)(landowners whose land would be crossed by pipeline route granted late intervention one year after dispositive order but prior to order on rehearing).

[15] *California DWR and the City of Los Angeles*, 120 FERC ¶ 61,057, at P 9 (2007). *See Texas Eastern Transmission, LP*, 102 FERC ¶ 61,262, at P 11-12 (2003) (denying late intervention where proceeding had been underway for several years and granting motions would have been disruptive).

[16] *Summit Hydropower*, 58 FERC ¶ 61,360, at 62,199-2000 (1992).

motion to intervene, it is not a party to this proceeding as defined in Rule 102(c)(3)[17] and therefore cannot request rehearing.[18] However, its concerns will be addressed in answering the Tribes' request for rehearing.

17. Energy Action NW argues that it should be granted late intervention because it could not have filed a timely intervention in 2006 since it was created in August 2008. Being newly-formed is not a sufficient reason to grant late intervention at this late stage of the proceeding. Allowing a newly-formed entity to intervene late based on the date of its formation could encourage the formation of groups simply to seek late intervention. Energy Action NW does not allege that its members or member groups did not have adequate notice of the proceeding. In this case, EnergyAction NW supports the Bradwood Project and states that its members favor prompt final action by the Commission that will lead to the construction and operation of the project. Our issuance of this order denying rehearing addresses Energy Action NW's concerns regarding prompt Commission action in this proceeding. We note that granting EnergyAction NW late intervention at this stage would serve no purpose. The purpose of seeking to intervene in a Commission proceeding, particularly at this late stage, is to obtain party status, which entitles the intervenor to file a request for rehearing of any final order issued in the proceeding and to seek judicial review of such orders. EnergyAction NW did not timely file a request for rehearing of the September 18 Order but appears to agree with the Order, so there would be no benefit to EnergyAction if we were to grant its request for late intervention.

18. For these reasons, we will deny the late motions to intervene by CTUIR and Energy Action NW.

B. Request for Stay and Motion to Hold Rehearing in Abeyance

19. In its request for rehearing, filed on October 20, 2008, Oregon requests that the Commission stay its September 18 Order until the State of Oregon completes pending reviews and issues permits for the Bradwood Project. Subsequently, on November 13, 2008, NorthernStar filed a motion to hold the rehearing in abeyance so that the States of Oregon and Washington will have additional reasonable time to consider the applications for state permits and so that a biological opinion for the project may be issued and considered in the rehearing order.

20. Oregon, Riverkeeper, the Tribes and Ecology all filed answers opposing NorthernStar's motion to delay acting on the request for rehearing. Oregon abandons its

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[17] 18 C.F.R. § 385.102(c)(3) (2008).

[18] *See* 18 C.F.R. § 385.713(b) (2008).

earlier position that the Commission should stay the September 18 Order. Instead, Oregon, joined by Ecology, argues that the NGA gives the Commission only four options for responding after a request for rehearing is filed,[19] and that these consist of granting, denying, abrogating the underlying order or modifying the order without further hearing. They state that if the Commission takes any action apart from granting rehearing, it should abrogate the September 18 Order by withdrawing and vacating the order. Riverkeeper notes that NorthernStar's motion supports the parties' contention on rehearing that the September 18 Order was issued prematurely. It further states that granting the requested relief would only add to the harm caused by the order by denying the intervenors their rights to seek prompt judicial review of the order.

21. Riverkeeper submits that NorthernStar's motion is essentially a request for a stay, but that it has not made the necessary showing that it will be irreparably harmed absent the grant of a stay. Instead, Riverkeeper and the Tribes state that the stay would only benefit NorthernStar and deprive the intervenors expeditious review of the Commission's order. Further, they contend that NorthernStar's motion should be denied as untimely. They state that because the motion was filed on November 13, 2008, they were deprived of the normal 15 days to file a response [20] because the Commission deadline for acting on the requests for rehearing was November 17, 2008.[21]

Commission Response

22. NorthernStar offers no convincing reason why the public interest would be served by delaying an order on rehearing until state permits are issued and the biological opinion is completed, particularly in light of the parties' contentions that the Commission's obligation to act on rehearing and their own right to judicial review of the September 18 Order are thwarted by any such delay. Further, NorthernStar cannot begin construction until after the state permits and biological opinion are complete. Therefore, we will deny NorthernStar's request to hold the rehearing in abeyance.

[19] *Citing* 15 U.S.C. § 717r(a) in relevant part, "Upon such application [for rehearing] the Commission shall have the power to grant or deny rehearing or to abrogate or modify its order without further rehearing."

[20] 18 C.F.R. § 385.213 (2008).

[21] On November 17, 2008, the Commission issued an order granting rehearing for further consideration to afford additional time for consideration of the matters raised in the requests for rehearing.

III. Discussion

23. On rehearing the parties assert that the Commission's final EIS is deficient for a number of reasons, particularly, they argue, because it includes recommendations for studies, surveys, and plans that are inaccurate and incomplete. Further, the parties assert that Commission should not have issued an order until after receiving state determinations pursuant to the Clean Water Act (CWA),[22] the Coastal Zone Management Act (CZMA)[23] and the Clean Air Act (CAA).[24] Premature approval of this proposal, they assert, invalidates the environmental conclusions because the public has been unable to evaluate and comment on the true effects of the imposed mitigation measures.

A. Authorization Prior to Determinations under the CWA, CZMA and CAA

24. Oregon, Riverkeeper, Tribes, and Ecology, variously, contend that the Commission violated the CWA, CZMA and CAA by issuing its order before receiving necessary state certifications.[25] First, the parties state that section 401 of the CWA bars the Commission from issuing a license for an LNG import terminal until the applicant has received a water quality certificate from the appropriate state agency (the Oregon Department of Environmental Quality (Oregon DEQ) and Ecology are the certifying state agencies under the CWA for the States of Oregon and Washington, respectively). [26]

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[22] 33 U.S.C. § 1251.

[23] 16 U.S.C. § 1451 *et seq.*

[24] 42 U.S.C. §§ 7401-7671q.

[25] *Citing Alabama Rivers Alliance v. FERC*, 325 F.3d (D.C. Cir. 2003); 18 C.F.R. § 5.23(b); *City of Tacoma, Washington v. FERC*, 469 F.3d 53 (D.C. Cir. 2006); *S D Warren Co. v. Maine Board of Environmental Protection*, 547 U.S. 370, 126 S Ct 1843, 164 Led 2d 125 (2006); PL 91-224 (April 3, 1970); *Chevron USA v. Natural Resources Defense Council, et al.*, 467 U.S. 837 (1984); *Mountain Rhythm Resources v. FERC*, 302 F2d 958 (9th Cir. 2002); 71 Fed. Reg. at 789-90 (Jan. 5, 2006); 40 C.F.R. § 93.150; *Scenic Hudson Preservation Conference v. FPC*, 354 F.2d 608 (2d Cir. 1965).

[26] NorthernStar originally submitted its application to the Oregon DEQ to obtain its section 401 certification from that state as part of it Joint Permit Application (JPA) with the COE in October 2006. The JPA for Oregon was revised in March 2007, withdrawn and then resubmitted in October 2007. According to Oregon, NorthernStar again revised and resubmitted its application for a section 401 certificate to the Oregon DEQ on September 2, 2008. The Oregon DEQ has a maximum of one year from that date to make its decision on the certification. The Oregon DEQ has requested additional

(continued…)

Next, the parties argue that the CZMA includes a similar restriction on the Commission's NGA section 3 jurisdiction to authorize the building of an import or export terminal until the applicant has obtained a consistency concurrence from the Oregon Department of Land Conservation and Development (Oregon DLCD).[27] Finally, the parties contend that the Commission violated section 176(c)(1) of the CAA by authorizing the Bradwood Project prior to the grant of an air quality permit from the Oregon DEQ.

25. The parties assert that through section 401 of the CWA, Congress gave states primary authority to protect water quality and thus provides that "[n]o license or permit shall be granted until the certification required by this section has been obtained or has been waived. . . ."[28] They state that this provision is unambiguous on its face and bars the Commission from taking any action until after the state issues a section 401 certification. Similarly, they note, the CZMA applies when "any applicant" seeks "a required Federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water or use or natural resource of the coastal zone of [a] state."[29] Thus, the applicant must provide the state permitting agency a certification that the proposed activity complies with the state's approved program and that such activity will be conducted in a manner consistent with the program. The state then notifies the Federal agency whether it concurs or objects to the applicant's certification. In any case, the parties note, the CZMA states that "[n]o license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification."[30] Finally, the parties state, section 176 of the CAA provides that "[n]o department, agency or instrumentality of the Federal Government shall engage in,

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information from NorthernStar and states that it will resume processing and analysis of the application upon receipt of that information. To obtain its section 401 certification from the State of Washington, NorthernStar submitted a Joint Aquatic Resources Permit Application (JARPA) to the COE and Ecology on October 12, 2006, but withdrew that application on September 10, 2007, and resubmitted it the following month. After one more withdrawal, NorthernStar submitted a revised JARPA to Ecology on September 18, 2008, which restarted the statutory one-year period that Ecology has to review the application.

[27] NorthernStar has submitted to the Oregon DLCD a consistency certification pursuant to the CZMA. The Oregon DLDC is currently in the process of reviewing the consistency certification and NorthernStar and the Oregon DLCD have agreed to a stay of the decision until May 5, 2009.

[28] 33 U.S.C. §1341(a)(1).

[29] 16 U.S.C. §1465(c)(3)(A).

[30] *Id*.

support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved or promulgated under Section 7410 of this title."

26. Because the statutory prohibitions in the CWA, CZMA and CAA mirror one another, the parties assert that the Commission may not issue a license until after NorthernStar has received all necessary permits under those statutes. The fact that it may take time for NorthernStar to obtain the necessary permits and concurrences, the parties argue, does not give the Commission the right to ignore the clear limitations on its ability to issue a license or approve a project. Any assertion that the Commission's authority to impose conditions on a license justifies its actions in this case is equally unavailing, the parties contend, and any conditions imposed by the state must be conditions of the license without alteration by the Commission.

27. The parties further contend that the Commission's reliance on conditions exceeds its authority under the NGA and unlawfully denies the public a meaningful opportunity to seek rehearing or judicial review. They note that the NGA's conditioning authority is intended to protect the public interest, but that in this case the conditions serve to expedite the permitting process without providing the public with the opportunity to assess the reasons for the decision. While NGA section 3 allows the Commission to impose "appropriate conditions" on its orders, the parties claim that such general authority cannot be used to avoid the specific requirements of other statutes with equal standing like NEPA, CWA, CZMA, CAA and the Endangered Species Act (ESA).[31] Moreover, the parties vigorously reject the notion that conditions are necessary to move the project forward efficiently. Rather, they assert that issuing an order contingent upon numerous critical conditions undermines their procedural rights to petition for rehearing. They note that they must raise every issue on rehearing in order to preserve their rights to judicial review,[32] but they are impeded from doing so because of the numerous issues left pending by the September 18 Order. Therefore, Oregon expressly requests that the rights of all the parties be preserved to seek rehearing once the State had completed the required reviews.

Commission Response

28. Although we have found that the Bradwood Project is consistent with the public interest under the NGA, we recognize that the project cannot proceed until it receives all other necessary federal authorizations, including those delegated to the states. As the parties have noted here, these include relevant authorizations under the CWA, CZMA

[31] 16 U.S.C. § 1536 (a)(2).

[32] 15 U.S.C. § 717r.

and CAA. The Commission's practice has been to authorize import terminals and issue certificates for natural gas pipelines pursuant to its NGA authority after it has completed its necessary review.[33] Accordingly, consistent with longstanding practice, and as authorized by NGA section 7(e)[34] and NGA section 3(e)(3)(A),[35] the Commission typically authorizes natural gas projects pursuant to its NGA jurisdiction subject to conditions that must be satisfied by an applicant or others before the authorizations can be effectuated by constructing and operating the project.[36] As is the case with virtually every order issued by the Commission that authorizes construction of facilities, the approval in this proceeding is subject to NorthernStar's compliance with the environmental and other conditions set forth in the order.

29. We disagree that we impermissibly issued our order authorizing the Bradwood Project prior to the finalization of all state and federal authorizations under the CZMA, CWA and CAA, or that the state's rights under those statutes have been violated. NorthernStar must receive the necessary state approvals under these federal statutes prior to construction. Our authorization in the September 18 Order does not impact any substantive determinations that need to be made by the states under these federal statutes. The Oregon and Washington state agencies retain full authority to grant or deny the specific requests. Moreover, because construction cannot commence before all necessary authorizations are obtained, there can be no impact on the environment until there has been full compliance with all relevant federal laws.

30. Rather, as we have stated before, the Commission's approach is a practical response to the reality that, in spite of the best efforts of those involved, it may be

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[33] *See, e.g., Crown Landing LLC*, 117 FERC 61,209, at P 26 (2006); *Weaver's Cove Energy, LLC*, 114 FERC ¶ 61,058, at P 108-115 (2006); *Islander East Pipeline Co.*, 102 FERC ¶ 61,054, at P 41-44 (2003); *Millennium Pipeline Co., L.P.*, 100 FERC ¶ 61, 277, at P 225-231 (2002)

[34] Section 7(e) of the NGA grants the Commission the "power to attach to the issuance of the certificate and to the exercise of rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require." 15 U.S.C. § 717(f)(e).

[35] Under NGA section 3(e)(3)(A) the Commission may by its orders approve such application, "in whole or part, with such modifications and upon such terms and conditions as the Commission may find necessary or appropriate." 15 U.S.C. § 717b(e)(3)(A).

[36] *East Tennessee Natural Gas Co.*, 102 FERC ¶ 61,225, at P 23 (2003), *aff'd sub nom. Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323 (D.C. Cir. 2004).

impossible for an applicant to obtain all approvals necessary to construct and operate a project in advance of the Commission's issuance of its certificate without unduly delaying the project.[37] While NorthernStar is unable to exercise the authorization to construct and operate the project until it receives all necessary federal authorizations, the Commission takes this approach in order to make timely decisions on matters related to its NGA jurisdiction that will inform project sponsors, and other licensing agencies, as well as the public.[38] This approach is consistent with the Commission's broad conditioning powers under sections 3 and 7 of the NGA, as explained below.

31. As we have stated in response to similar arguments, we believe our conclusions are supported by *City of Grapevine,*[39] where the court upheld the Federal Aviation Administration's (FAA) approval of a runway, conditioned upon the applicant's compliance with the National Historic Preservation Act (NHPA). The Commission found the NHPA to be analogous to the CWA and CZMA, in that section 106 of the NHPA states that the head of a federal agency "shall," take into account the effect of an undertaking on historic properties "prior to the approval of the expenditure of any Federal funds on an undertaking or prior to the issuance of any license…" Thus, the Commission explained, "this language expressly prohibits a federal agency from acting prior to compliance with its terms, a fact that did not deter the *City of Grapevine* court from upholding the FAA's conditional approval of a runway."[40]

32. The Commission has also relied on *Public Utility Commission of the State of California*[41] which affirmed the Commission's determination that, contingent upon the completion of environmental review, there were no non-environmental bars to construction of a proposed pipeline. In doing so, the court noted that the "Commission's non-environmental approval was expressly not to be effective until the environmental

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[37] *See, e.g., Crown Landing LLC,* 117 FERC 61,209, at P 26 (2006); *Millennium Pipeline Co., L.P.,* 100 FERC ¶ 61, 277, at P 225-231 (2002).

[38] To rule otherwise would have the potential to place the Commission's administrative process indefinitely on hold until states with delegated federal authority choose to act. Such an approach would likely delay the in-service date of major infrastructure projects to the detriment of consumers and the public in general.

[39] 17 F.3d 1502, 1509 (D.C. Cir. 1994).

[40] *Georgia Strait Crossing Pipeline LP,* 108 FERC ¶ 61,053, at P 16 (2004).

[41] 900 F.2d 269 (D.C. Cir. 1990).

hearing was completed" and that an agency can make "even a final decision so long as it assessed the environmental data before the decision's effective date."[42]

33. The court's holding in *State of Idaho v. Interstate Commerce Commission*[43] also supports the issuance of the conditioned authorization in this proceeding. In that case, the court reviewed the ICC's issuance of authorization for a railroad to abandon and salvage a stretch of track. The authorization provided that the railroad could not begin salvage activity until: it had consulted with the state and the EPA regarding the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA); it had consulted with the U.S. Fish and Wildlife Service (FWS) and the COE regarding wetlands and related issues; ESA compliance was completed; and any necessary water quality certification had been obtained. While the court concluded that the ICC had erred by not performing a proper NEPA analysis and had violated ESA regulations by not preparing a biological assessment, it also stated that it is "important to note that the Commission has still not given final approval to salvage operations; it has merely set forth the conditions under which [the railroad] may undertake them if it chooses to do so." The court quoted a statement from counsel for the ICC at oral argument that the Commission's interpretation of its authorization was that the railroad had to prepare a biological assessment, followed by FWS' issuance of a biological opinion, at which point the railroad would come back before the Commission, which would then decide what to do, based on the findings of the biological assessment and the biological opinion.[44]

34. We find that the parties' reliance on the *City of Tacoma* is unavailing. There the court considered what constitutes a state certification under section 401 of the CWA, and only references in passing the Commission's granting a license or permit within the meaning of the statute. Reliance on *Alabama Rivers* is also misplaced since that case addressed the issue of whether a modification to an existing license requires a state water quality certification. In both instances, the timing of certifications was not an issue.[45]

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[42] *Id.* at 282.

[43] 35 F.3d 585 (D.C. Cir. 1994).

[44] *Id.* at 598.

[45] The parties' citations to *Mountain Rhythm* and *S.D. Warren Co.* are likewise inapposite. *Mountain Rhythm* involved a dispute as to whether potential projects were correctly and legally determined by NOAA to be in a coastal zone. *S.D. Warren Co.* addressed the issue of whether operating a dam to produce hydroelectricity caused a "discharge" under section 401 of the CWA.

35. While there is no direct judicial precedent on the issue of whether the Commission can issue authorizations under the NGA prior to the completion of state determinations under the CWA, CZMA and CAA, we believe these judicial precedents construe the statutory terms with appropriate respect for the practical demands facing an administrative agency and as necessary to accomplish disparate statutory goals, without doing violence to such terms.[46]

36. Finally, we are unpersuaded that deferral to other agencies of the consideration of important impacts that will require mitigation will cost the parties their right to seek judicial review of our decisions. This order constitutes final action by the Commission and parties who are aggrieved may seek judicial review of the order upon its issuance. In addition, no construction and/or operation of the authorized facilities can commence until the numerous conditions to our authorizations are met. Information required by those conditions will be filed with the Commission and available for review and comment by the public. The Director of the Office of Energy Projects will issue orders as necessary ruling on NorthernStar's compliance with conditions. To the extent those orders constitute substantive decisions, as oppose to ministerial actions, they will be subject to rehearing the the Commission. The Commission's orders, in turn, will be subject to judicial review. Therefore, the due process rights of all parties are fully protected within our process.

B. Authorization Prior to Consultations under the ESA and MSA

37. Oregon, Riverkeeper, Tribes, and NMFS[47] assert that the Commission erred by issuing its order before formal consultation with the NMFS commenced pursuant to section 7(a)(2) of the Endangered Species Act (ESA). They state that the ESA requires a federal agency to consult with the NMFS on potential effects to threatened and endangered aquatic species prior to taking final agency action.

38. The parties also contend that the Commission's decision not to consult with NMFS concerning the project's effects on essential fish habitat pursuant to section 305 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) is inconsistent with the MSA. They state that MSA section 305(b) requires federal agencies to consult with NMFS if their action may adversely affect essential fish habitat and such consultation and responses to recommendations must be completed prior to a final agency decision.

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[46] *See, e.g., Crown Landing LLC*, 117 FERC ¶ 61,209, at P 18-21 (2006).

[47] NMFS states that its concerns are solely directed at the procedures adopted by the Commission, not the merits of the underlying application or its biological effects.

39. Because the Commission has neither initiated nor completed consultation with the NMFS pursuant the ESA or the MSA, NMFS urges the Commission to stay its September 18 Order until consultation is completed. In the alternative, NMFS requests the right to seek rehearing of any issue that subsequently arises in the consultation process required by the ESA and MSA so that its right to seek judicial review under the NGA is preserved.[48] Further, NMFS recognizes that the Commission issues conditioned licenses to provide project proponents, who commit substantial funds and need to secure long-term capital for construction of projects, some assurance that the application may likely be approved. NMFS would like the Commission to consider whether the same purpose could be served by issuing the final EIS and explicitly predicting the license issuance once the outstanding legal requirements have been met.

Commission Response

40. Under section 7 of the ESA, every federal agency "shall, in consultation with and with the assistance of the Secretary, insure than any action authorized, funded or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of the endangered or threatened species or result in the destruction or adverse modification of habitat of such species …."[49] As explained in our final EIS for the Bradwood Project, p. 1-13, the Commission, as the lead federal agency, is responsible for preparing a biological assessment (BA) to identify the nature and extent of adverse impacts on federally listed threatened and endangered species, and to recommend measures to be implemented to avoid or reduce impacts. Both the FWS and NMFS can respond to our BA with their Biological Opinions (BO) of whether the project may jeopardize the continued existence of any listed species. Formal consultation under the ESA is initiated on the date the request is received, if the action agency provides all the relevant data required by 50 C.F.R. § 402.14(c).[50] The Commission made the request when we submitted our initial BA to the FWS and NMFS on March 19, 2007.

41. Section 305(b)(2) of the MSA states that "[e]ach Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act." According to NMFS, the requirement that consultation must be completed prior to a final decision is clarified in regulations promulgated by the agency and codified at 50 C.F.R. § 600.920. In order to comply with

[48] 15 U.S.C. §717f.

[49] 16 U.S.C. § 1536(a)(2).

[50] 50 C.F.R. § 402.14(g)(3).

the MSA, the Commission developed an essential fish habitat assessment (EFH Assessment) and consolidated it with our BA.

42. Informal consultations between Commission staff and representatives of the FWS and NMFS have been on-going since 2005 through face-to-face meetings (more than 30 to date), conference calls, and correspondence, all documented in the record for this proceeding. The Commission submitted a BA/EFH Assessment to the FWS and NMFS on March 19, 2007, and requested that formal consultation be initiated. In a letter to the Commission, dated April 20, 2007, the FWS wrote: "[t]he [FWS] has not received all of the information necessary to initiate formal consultation on the Bradwood Landing LNG and Pipeline Project, as outlined in the regulations governing interagency consultation (50 C.F.R. § 402.14). To complete the initiation package, we will require additional information…." Similarly, the NMFS responded to our March 2007 BA/EFH Assessment in a May 11, 2007 letter, stating that it had "not received all of the information necessary to initiate formal consultation on the Bradwood Landing Project as outlined in the regulations governing interagency consultations" and requested a revised BA/EFH Assessment containing additional specified information. Subsequently, Commission staff and representatives of the FWS and NMFS have continued to communicate to develop specific scientific studies that would fill in data gaps in our original BA and EFH Assessment. Commission staff is currently revising the BA and EFH Assessment to address the concerns of the FWS and NMFS, based on these additional data. These facts were all set forth in the final EIS. The Commission will re-initiate formal consultations when we submit a revised BA/EFH Assessment.

43. FWS and NMFS have fully participated in the NEPA process for this proceeding, through the "informal" consultations mentioned above, and comments on the record concerning drafts of plans and reports filed by NorthernStar, and on the draft and final EISs. As part of the ESA and MSA compliance process, the FWS and NMFS provided detailed comments on our March 2007 BA and EFH Assessment. These comments influenced the further refinement of facility design, operational practices, and development of mitigation measures. Some of the environmental conditions contained in the Commission's September 18 Order specifically address ESA- and MSA-related concerns raised in their comments. In particular, condition 43a states that the applicants "shall not begin construction activities at the LNG terminal and the pipeline until the staff completes formal consultation with NMFS and FWS." If the completion of formal consultation results in a BO finding of jeopardy or adverse modification to critical habitat, the project could not go forward, unless mutually agreeable modifications are adopted. Once the applicable conditions of the September 18 Order have been met, the Commission would issue a "Notice to Proceed" with construction. Because the Commission order is conditioned, it is the Notice to Proceed which represents the Commission's "final decision" in the context of the ESA and MSA.

44. It is typical Commission practice to issue an order prior to completion of formal consultations under the ESA and MSA in situations where there are complex issues related to federally listed threatened and endangered species. It is common on such projects that there are some areas along the proposed pipeline where biological surveys to identify habitat and occupation for specific species cannot be finished until after an order is issued, and the applicants can use the powers of eminent domain under section 7(h) of the NGA to acquire easements for private parcels where access was previously denied. We believe that the environmental conditions in the Commission's September 18 Order ensure compliance with applicable laws and regulations, including the ESA and MSA. NorthernStar cannot begin construction on the Bradwood Project until it receives a Notice to Proceed and the Commission will not issue that notice until NorthernStar receives all necessary authorizations under the Acts discussed above. We believe this provides the necessary environmental safeguards, irrespective of the sequential timing of order issuance. The Commission also believes its current practice of issuing conditioned orders is preferable and provides a greater degree of certainty than the alternative "preliminary permit" process suggested by NMFS, while still protecting the rights and interests of all parties.

C. Need for a Supplemental EIS

45. Oregon and Riverkeeper submit that the Commission should be required to prepare a supplemental EIS to consider two new developments that are relevant to the environmental concerns of the proposed action. Oregon notes that on October 9, 2008, the International Maritime Organization (IMO) adopted new standards to control exhaust emissions from the engines of oceangoing vessel (OGVs). Further, on October 10, 2008, Oregon LNG filed an application to site, construct and operate an LNG terminal in Warrenton, Clatsop County, Oregon and an associated pipeline. Because the new LNG terminal proposal may have particular impact on the cumulative impacts analysis and vessel transit issues, Oregon contends it must be considered by the Commission.

46. The parties also assert that the final EIS falls short of NEPA's required "hard look" in its analysis of many environmental and cumulative impacts of the project. They also maintain that the order's environmental conditions delay the environmental analysis required by NEPA until future reports and mitigation plans are filed by NorthernStar, thereby deferring detailed consideration of numerous environmental impacts and how they would be mitigated until after the final EIS. They note that although NEPA requires the relevant environmental information be publicized and subjected to public scrutiny prior to the agency making a decision[51] and, while complete mitigation plans are not required, NEPA requires that an EIS contain a "reasonably complete discussion of

[51] 40 C.F.R. § 1500.1(b).

possible mitigation measures"[52] They contend that the final EIS does not discuss mitigation plans in sufficient detail to ensure that environmental consequences have been fairly evaluated. Riverkeeper lists other post-final EIS developments including letters, reports, notes, and technical information, particularly supplied by NorthernStar to the Commission, that Riverkeeper states should be available for comment and analysis.[53]

47. Further, the parties note that many conditions in the September 18 Order require important environmental information to be provided and approved by the Director of the Office of Energy Projects (OEP) before construction and operation without apparent opportunity for meaningful public comment which, they assert violates NEPA and the due process requirements of the APA.

48. To cure these alleged deficiencies, the parties request that the Commission withdraw the September 18 Order and the final EIS and issue a supplemental draft EIS to allow the public to make meaningful comments to the project.

Commission Response

49. As Riverkeeper points out, on October 9, 2008, the IMO adopted stringent new engine and fuel standards to control harmful exhaust emissions from the engines that power OGVs. Included in the new standards is the requirement that, beginning in 2015, new and existing ships operating in to-be-designated emission control areas (ECAs)[54] will be required to use fuel with no more than 1,000 parts per million (ppm) sulfur, or a 98 percent reduction from today's global cap. Beginning in 2016 new ships operating in ECAs must also have engines designed to cut emissions of ozone-forming oxides of nitrogen (NOx) by about 80 percent. The new fuel standards will phase in over time beginning with an interim fuel sulfur standard in 2010. Beginning in 2020, OGVs everywhere will be required to use fuel with at most 5,000 ppm sulfur, or a 90 percent reduction from today's global cap (pending a fuel availability review in 2018). The

[52] *Citing Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352, 109 S. Ct. 1835, 104 L. Ed. 2d 351 (1989).

[53] Riverkeeper's October 20, 2008 request for rehearing at 68-70.

[54] Countries will need to seek ECA designations from the IMO to realize fully the benefits of this program. The EPA states that it is working with all parts of the federal government to prepare an application for ECA status for U.S. coasts and will submit that application to IMO as soon as possible. *See* http://epa.gov/otaq/regs/nonroad/marine/ci/420f09033.htm.

engine standards will apply to new engines in 2011, and to existing engines as certified low-emission kits become available, beginning in 2011.[55]

50. Given the prospective nature of the new standards and the eventual expected improvement they will bring to the air quality on the Columbia River and around the Bradwood Terminal, it is unclear what benefit Riverkeeper believes will result from issuing a supplemental EIS to study the environmental impact of the new IMO standards and we decline to do so.

51. Riverkeeper argues that the Commission should issue a supplemental EIS to study the cumulative effect of Oregon LNG's project. Although the final EIS was issued prior to Oregon LNG's October 10, 2008 filing of its application in Docket Nos. CP09-06-000 and CP09-07-000, the final EIS nevertheless considered future impacts resulting from the construction and operation of the Oregon LNG terminal because Oregon LNG was in the pre-filing review stage while the EIS was being prepared. The cumulative impact section of the final EIS considers future impacts resulting from the construction and operation of the Oregon LNG terminal including potential increases in vessel transit based on Oregon LNG's draft environmental resource reports that it submitted during pre-filing. We believe that analysis meets the requirements of NEPA with respect to cumulative impacts so that no supplemental EIS is necessary to further analyze the Oregon LNG project.

52. We disagree that the final EIS for the Bradwood Project was based on inadequate information because certain reports and studies were not required to be filed until after the final EIS was issued. As we have explained in other cases,[56] practicalities require the issuance of orders prior to completion of certain reports and studies because large projects such as this take considerable time and effort to develop. Perhaps more importantly, their development is subject to many significant variables whose outcomes cannot be predetermined. Thus, some aspects of a project may remain in the early stages of planning even as other portions of the project become a reality. Accordingly, consistent with longstanding practice, and as authorized by NGA section 7(e)[57] and NGA

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[55] For additional information on these and other new requirements see *id*.

[56] *See, e.g., Weaver's Cove Energy, LLC*, 114 FERC ¶ 61,058, at P 108-115 (2006); *Islander East Pipeline Co.*, 102 FERC ¶ 61,054, at P 41-44 (2003).

[57] Section 7(e) of the NGA grants the Commission the "power to attach to the issuance of the certificate and to the exercise of rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require." 15 U.S.C. § 717(f)(e).

section 3(e)(3)(A),[58] the Commission typically authorizes natural gas projects pursuant to its NGA jurisdiction subject to conditions that must be satisfied by an applicant or others before the authorizations can be effectuated by constructing and operating the project.[59] As is the case with virtually every order issued by the Commission that authorizes construction of facilities, the approval in this proceeding is subject to NorthernStar's compliance with the environmental conditions set forth in the order.

53. As the Supreme Court stated in *Robertson* "NEPA does not require a complete plan be actually formulated at the onset, but only that the proper procedures be followed for ensuring that the environmental consequences have been fairly evaluated."[60] Here, the Commission made extensive efforts to ensure that environmental issues were resolved appropriately. The issues the parties raise were discussed in considerable detail in the final EIS and were subject to public comment. Based on the information in the record, we imposed additional measures to mitigate any adverse environmental impact associated with the project. For example, to address seismic risk associated with proximity of the proposed facilities to the Cascadian Subduction Zone (final EIS section 4.1.3.3), the September 18 Order includes condition 16 requiring NorthernStar to retain a Board of Consultants to review seismic design details. In addition, to mitigate for noise associated with blasting during construction, condition 36 requires that NorthernStar develop a Blasting Management Plan (final EIS section 4.5.2.3), in consultation with appropriate federal and state agencies, while condition 30 requires that NorthernStar revise its Bubble Curtain Contingency Plan to reduce noise from pile driving (final EIS section 4.5.2.1).

54. The Commission's September 18 Order discussed the Commission's rationale for not issuing a supplemental EIS and that reasoning stands: the Bradwood Project has not substantially changed since the issuance of the draft EIS. For example, contrary to Riverkeeper's contention that the pipeline route is unclear, the final EIS clearly illustrates the pipeline route on maps in Appendix B. This is the same route shown in the draft EIS, and is the route authorized in the Commission's September 18 Order. Likewise, the areas considered for disposal of dredge material were discussed in both the draft and final EIS. Nor has NorthernStar changed its proposal to use submerged combustion vaporizers (SCV) at the terminal. According to the Council on Environmental Quality's regulations

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[58] Under NGA section 3(e)(3)(A) the Commission may by its orders approve such application, "in whole or part, with such modifications and upon such terms and conditions as the Commission may find necessary or appropriate." 15 U.S.C. § 717b(e)(3)(A).

[59] *East Tennessee Natural Gas Co.*, 102 FERC ¶ 61,225, at P 23 (2003), *aff'd sub nom. Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323 (D.C. Cir. 2004).

[60] 490 U.S. at 352.

for implementing NEPA, a supplement to an EIS is only necessary if there have been substantial changes made to the proposed action, or if significant new information about the project becomes available (40 C.F.R. Part 1502.9(c)(1)). As we discussed above, neither situation is applicable to the Bradwood Project. In comments on the final EIS, the NMFS acknowledged that the proposed action had not changed in concept from the original proposal, and the EPA stated that the project described in the final EIS was generally consistent with the project detailed in the draft EIS.

55. We do not agree that a supplemental EIS is necessary to evaluate the impacts and potential effectiveness of the post-authorization design plans and studies recommended in the final EIS and required in the September 18 Order. As noted above, it is impractical, and sometimes impossible, to complete all studies and develop the plans necessary to successfully mitigate potential impacts of a natural gas project prior to the issuance of a Commission order. While the vast majority of impacts were identified and general mitigation measures described in the final EIS, additional post-authorization plans and studies will serve to refine the mitigation to address site-specific circumstances prior to construction. Some of the post-authorization conditions requiring site-specific plans and surveys are necessary because NorthernStar cannot gain access to certain land parcels to complete the surveys without the use of eminent domain. It is typical that applicants file data after the Commission issues an order, and these filings are made in the public record for the proceeding, and therefore can be reviewed. This process is transparent. In the case of the Bradwood Project, NorthernStar filed data after the issuance of the final EIS and the September 18 Order that may be used by staff in producing its revised BA.

56. We will address the arguments raised on rehearing concerning alleged inadequacies in the final EIS with respect to specific environmental and cumulative impact issues below.

D. Aquatic Resources

57. The parties maintain that the final EIS and the September 18 Order fail to fully consider the impacts of the Bradwood Project on aquatic resources – specifically the numerous species of salmonids in the Columbia River which are federally listed as threatened and endangered. While the Commission finds that with implementation of mitigation plans the impacts on sensitive species and their habitats would be minimal (final EIS, pp. 4-296-98), the parties contend that the Commission did not conduct a thorough analysis of the particular impacts (direct, indirect and cumulative) on particular species or analyze the ability of the mitigation to reduce impacts. More specifically, they state the Commission: (1) fails to disclose and analyze the fish screening technology that will be used to ensure the protection of juvenile salmonids or the impacts of discharging cooling ballast water from the project; (2) fails to analyze the impacts from sediment loading from the extensive dredging of the Columbia River bottom associated with the

project; (3) does not analyze and disclose the extent of pipeline frac-outs;[61] and (4) fails to assess and disclose the impact of numerous other project activities on salmonids and marine mammals.

1. Fish Screening and Water for Ballast and Engine Cooling

58. The parties state that the impacts of the intake of significant quantities of Columbia River water for ballast and the discharge of engine cooling water to the river have not been adequately analyzed. The parties assert that the final EIS lacks information to evaluate whether the proposed fish screening system will be able to prevent, or mitigate, juvenile salmonids from being trapped and killed by the water intake system

59. The parties state that there is nothing in the present record regarding the type of fish screen that will be used to supply water to non-retrofitted LNG carriers, or whether it will be effective, despite the fact that there is evidence of significant impact to salmonids without such technology. Although Riverkeeper recognizes that the Commission's September 18 Order directed NorthernStar to file a fish screen plan within 60 days of the order, it submits that the information filed in response to this directive is not a part of the administrative record, was not considered by the public or the Commission, and does not satisfy NEPA.[62] Riverkeeper asserts that the fish screening condition should be mandatory, not voluntary, and notes that the Oregon DFW's regulations require NorthernStar's water intake to be equipped with passive fish screens that meet NMFS's Fish Screening Criteria for Anadromous Salmon.

60. Several parties are concerned that there are discrepancies between the information supplied by NorthernStar to the Commission and in NorthernStar's applications for state authorizations. They claim that while the final EIS identifies two 400 horsepower (hp) pumps with a maximum rate of discharge of 4,400 gallons per minute (gpm), NorthernStar's application to the State of Oregon for water appropriations mentions three 460 hp pumps with a maximum discharge rate of 10,000 gpm. The parties consider this

[61] A frac-out is the loss of drilling mud (usually consisting of 5 percent bentonite clay and 95 percent water), escaping through underground fissures to the surface, during a horizontal directional drill (final EIS, p. 4-95).

[62] While Ecology considers the adaptive management strategy, proposed in condition 32 of the September 18 Order, to modify the system over time as an important measure to ensure improvements, it finds that this after-the-fact monitoring is inadequate for establishing appropriate mitigation.

potential design change important because water diversion may have an impact on aquatic species, including salmonids.

61. Moreover, Riverkeeper and the Tribes are concerned that this alleged design change for water intake may be tied to NorthernStar's potential desire to employ an open loop regasification system, which they assert poses threats to aquatic resources that were not considered in the final EIS. They note that NorthernStar's intake screens are larger than necessary for current design but appropriate for an open-loop intake system and that NorthernStar has indicated that it may employ an open-loop system.[63] Riverkeeper views this discrepancy as a failure of the final EIS to adequately define the scope of the project and additional evidence of its failure to take a hard look at the impacts of the project.

62. Finally, several parties state that the final EIS does not provide the information needed to assure that LNG ship engine cooling water will be managed sufficiently to avoid worsening already elevated Columbia River water temperatures which have negative impact on salmon. Riverkeeper comments that NorthernStar did not provide a breakdown of the water requirements for engine cooling and ballast separately, alleging such information would be needed to determine the volumes of discharge from LNG carriers compared to the volumes that would be removed from the system. Riverkeeper and the Tribes note that the final EIS concludes that engine cooling water discharge would be 19.4 degrees Fahrenheit hotter than ambient water temperature at the point of discharge and that carriers that have not been retrofitted to use the screened water intake system could "temporarily elevate" water temperatures in the vicinity of the wharf (final EIS, p. 4-85). However, they maintain, performance standards to address cooling water discharges were submitted after the final EIS was issued and have not been subject to public review. The Tribes state that this post-EIS submission does not remedy the inadequacy of the final EIS.

Commission Response

63. The impacts of the intake of Columbia River water for the Bradwood Project are examined throughout the final EIS. As described in section 4.5.2.1 of the final EIS at 4-164, water withdrawals associated with construction and operation of the Bradwood Terminal would be a fraction of the total water flowing past the terminal site (i.e., less than 80 cfs). Although reduced downstream flows as a result of the proposed project are expected, the reduction would not be significant. With regard to potential for direct impacts on juvenile salmonids due to water intake, the final EIS acknowledged that impacts on sensitive aquatic resources would not be adequately mitigated to a less than significant level without a screening mechanism that minimizes entrainment and

[63] *Citing* Notes from Jan. 24 Conference Call between Commission, NOAA and NorthernStar at p. 2.

impingement of sensitive species of juvenile fish (final EIS section 4.5.2.1, p. 4-163). Therefore, we included condition 33 in the September 18 Order, which assures that all water taken on by LNG carriers for ballast and engine cooling will be screened.

64. The final EIS also contains data necessary to evaluate whether the proposed fish screening system would be able to prevent, or mitigate, juvenile salmonids from being trapped and killed by the water intake system at the Bradwood Terminal. As described in section 4.5.2.1 (final EIS, p. 4-160), all intakes at the proposed LNG terminal that withdraw water from the Columbia River would be screened to minimize the likelihood of entrainment and impingement of juvenile fish in accordance with the Oregon DFW and NFMS regulations and fish design criteria. In a January 8, 2007 filing, NorthernStar provided detailed design drawings of the water intake system, including the fish screens. Although this filing was classified as privileged and confidential, and thus is not available to the public, we included information on fish screens in our original BA and EFH Assessment submitted to the NMFS and FWS on March 19, 2007. That BA is part of the public record in this proceeding. The screen designs proposed by NorthernStar have been subsequently reviewed and approved by the NMFS.

65. Condition 33 of the September 18 Order does not specify the type of fish screen that must be used to screen ballast and engine cooling water for LNG carriers at the terminal dock that are not retrofitted to use NorthernStar's proposed wharf screened water system. However, as described above, NorthernStar has committed to screening all water intakes at the proposed LNG terminal that withdraw water from the Columbia River in accordance with the ODFW and NFMS regulations and fish design criteria. Although NorthernStar made this commitment voluntarily, it is a part of the proposed action. As such, its implementation is required as part of the Commission's authorization of the Bradwood Project. Based on this requirement, the Commission did not find it necessary to include a definition of the screening criteria in condition 33.

66. For LNG carriers not retrofitted to use the terminal water intake system that would screen water for ballast and engine cooling, NorthernStar proposed a "permeable curtain system," first described in an August 15, 2008 filing. This filing was placed into the administrative record prior to the Commission making a decision about the Bradwood Project. In response to condition 33 of the Commission's September 18 Order, NorthernStar filed additional details and drawings for the permeable curtain system on October 3 and November 17, 2008. Again, these plans are part of the public record for this proceeding, and are available for review. Any public and resource agency comments on this system relating to impacts on federally listed threatened and endangered aquatic species inhabiting the berth area, would be considered by staff prior to the issuance of our revised BA and EFH Assessment. The permeable curtain system, in combination with NorthernStar's previous proposal to serve retrofitted LNG carriers at the wharf with screened water, generally meet our expectations that all water intakes from the Columbia River for the LNG terminal have screens designed according to NMFS and Oregon DFW

specifications to reduce the potential for the entrainment or entrapment of juvenile fish. The screening of water at terminal intakes is a requirement of the Commission's authorization; it is not discretionary as suggested by Riverkeeper.

67. As stated in the final EIS, p. 4-84, NorthernStar did not provide a breakdown of water requirements for engine cooling and ballast water. Therefore, table 4.3.2-4 of the final EIS provided a breakdown of the typical water intakes and discharges associated with LNG carrier engine cooling and ballast as they were presented in the final EIS for the Broadwater Project. Using the information presented in this table, the reader can determine the volumes of discharge from LNG carriers (at most 57.2 million gallons) compared to the volumes that would be removed from the system (at most 25.6 million gallons). Sections 4.3.2.3 at 4-86 and 4.5.2.1, p. 4-157 of the final EIS provided analysis of potential impacts on surface water quality and salmonids, respectively, from further increases to water temperatures in the Columbia River due to engine cooling water discharge.

68. The final EIS, pp. 4-84-86 discussed the temperature of engine cooling water released into the Columbia River from LNG carriers at dock at the Bradwood Terminal. Because the engine cooling water would be discharged at a slightly higher temperature than the ambient temperature of the Columbia River, NorthernStar indicated that it would develop performance standards to mitigate impacts. As recommended in the final EIS, NorthernStar filed those performance standards regarding cooling of water discharge on July 7, 2008. This filing is part of the administrative record for this proceeding, and was available for review prior to the Commission's September 18 Order. During production of our revised BA and EFH Assessment, those performance standards may be used to assess potential impacts on federally listed threatened and endangered aquatic species that inhabit the terminal berth area. The revised BA will be part of the public record in this proceeding and the NMFS and FWS will have the opportunity to review the Commission staff's assessments through their BOs.

69. The parties express concern over discrepancies as to water pumps between the application in this proceeding compared to the application to Oregon for water appropriations. The Commission's September 18 Order only authorizes facilities proposed by NorthernStar in its applications and supplemental filings with the Commission as analyzed in our final EIS. With respect to water intake pumps these include three at the Bradwood Terminal which are discussed in the final EIS, p. 4-160: one at the temporary surface water intake for use during terminal construction for vibroflotation activities, and the second location with two pumps for permanent water withdrawals to supply the firewater station. We cannot confirm the difference that Riverkeeper and the Tribes believe may exist between NorthernStar's Commission application and its Oregon Water Resources Department application for water appropriations from the Columbia River. Likewise, NorthernStar is only authorized to

construct and operate SCVs at its LNG terminal, and not an open-rack vaporization system as speculated by Riverkeeper and the Tribes.

2. Dredging

70. Several parties are concerned that the impacts of dredging were not adequately analyzed in the final EIS; that the determination that elevated sediment delivery from pipeline stream crossings will be temporary is unsupported and contradicted by scientific literature; that the final EIS failed to consider the impact of stream crossing methods other than Horizontal Directional Drilling (HDD) particularly on unstable slopes; and what the impacts will be on water quality from the increased turbidity and re-suspension of toxins in river sediment.

71. Riverkeeper states that the Commission failed to address the concerns of NMFS and others that dredging to create the turning basis could alter the flow through the Clifton Channel and request that additional studies be made with the results included in the updated BA and EFH Assessment.

72. Oregon comments that dredge material placement alternatives should be considered including in-water disposal and requests the establishment of a short- and long-term disposal plan for the maintenance dredge material.

Commission Response

73. The final EIS addressed potential impacts on both water quality and aquatic resources from dredging (including increased suspended sediment and turbidity levels as well as resuspension of contaminated sediments) in sections 4.2.2.2, 4.3.2.3, and 4.5.2.1. Further, condition 21 of the September 18 Order requires that NorthernStar monitor the side slopes of the maneuvering area and develop slope protection measures in the berth and maneuvering area.

74. The final EIS also addressed the potential for dredging of the Bradwood Terminal turning basin to alter flows in the Columbia River and through Clifton Channel. Sections 4.2.2.2 and 4.5.2.1 of the final EIS summarize the results of modeling to analyze sediment transport and deposition based on flow rates. The results of the modeling found that small changes in the hydraulic characteristics associated with the proposed project could result in changes to existing fish habitats within other portions of the lower Columbia River, including Clifton Channel. As stated in the final EIS, p. 4-152, the Commission will include additional analysis of potential impacts on salmonids from alterations to sediment transport and deposition in the revised BA and EFH Assessment.

75. Section 3.1.9 of the final EIS, p. 3-65, addressed dredging and dredged material placement alternatives. Within this section, the placement of dredged materials is analyzed in two upland locations (Bradwood and Tenasillahe Island), in the Columbia

River (within flow lanes and scour holes), in the ocean (shallow water and deepwater), and as beach nourishment (at the Wahkiakum County Sand Pit site on Puget Island). In order to raise the base for the LNG terminal to the desired elevation of 20 to 25 feet North American Vertical Datum (NAVD) 88, however, NorthernStar proposes to place up to 700,000 cubic yards of the dredged material at the terminal site. The material that is not placed at the terminal site would be placed at the Wahkiakum County Sand Pit site, located at the northern end of Puget Island, if the site has capacity at the time of dredging. Because the availability of future capacity at dredged material placement sites cannot be predicted, it would not be reasonable for NorthernStar to develop a long-term disposal plan at this time; however, it has committed to placing materials from maintenance dredging in the Columbia River system (as described in meeting notes submitted in the record on December 4, 2008). Further, the COE would analyze dredged material placement alternatives when NorthernStar applies for maintenance dredging permits which would occur every five years throughout operation of the project.

3. Frac-Outs

76. A number of parties commented on the dangers of a frac-out during HDD under specific waterbodies crossed by the Bradwood Pipeline. The Tribes state that the final EIS failed to analyze the impacts of a frac-out on aquatic resources. They also contend that because no details are provided for the revised HDD Contingency Plan required by condition 24 of the September 18 Order, it cannot be determined whether the plan's measures would be effective in the mitigation of impacts from a frac-out.

Commission Response

77. The impacts of a frac-out on aquatic resources and measures that would be implemented to mitigate impacts are contained in the final EIS. For instance, section 4.5.3.1 of the final EIS, pp. 4-184-85 discusses potential impacts on aquatic resources due to a frac-out. The final EIS also included a discussion about suspended sediments and turbidity. Section 4.3.2.4 of the final EIS, pp. 4-95-6, describes the HDD Contingency Plan that NorthernStar included in Attachment B of its Waterbody and Wetland Construction and Mitigation Procedures Plan. That plan addressed both potential modes of failure for each phase of the drilling process, as well as mitigation measures that would be implemented should a frac-out occur under a waterbody or wetland. The HDD Contingency Plan establishes procedures for addressing potential impacts associated with a release of drilling fluid through hydraulically induced fractures during the HDD process. Additionally, the document describes detailed mitigation measures to be implemented to minimize impacts on federally listed aquatic species in the event of a frac-out. However, as pointed out in EPA's comments on our draft EIS, the plan did not address potential frac-outs in upland settings. Therefore, condition 24 of the Commission's September 18 Order requires that NorthernStar revise its HDD Contingency Plan to include mitigation measures to be implemented in the case of a frac-out in an upland area. When NorthernStar files its revised HDD Contingency Plan for

approval by the Director of OEP, the plan will be in the public record and parties may review and comment on it.

4. Marine Mammals and Turtles

78. In its request for rehearing, Riverkeeper alleges that the final EIS fails to disclose and assess impacts on marine mammals and sea turtles. It alleges that green turtles, olive ridley turtles, loggerhead turtles and other unidentified turtles are found in the action area and should have been included in the final EIS and need to be in the BA for the project. Riverkeeper claims that the Commission did not rely on current science for a number of species such as the Southern Resident killer whale, the threatened Stellar Sea Lion, the Gray Whale and the Harbor Seal.

79. Riverkeeper refers to the NMFS' July 14, 2008 comments on the final EIS. They state that the NMFS raised concerns regarding LNG carrier speeds and the potential for the ships to strike whales. Riverkeeper comments that mitigation measures proposed to limit noise impact to marine mammals are insufficient.

80. Finally, Riverkeeper asserts that the final EIS did not adequately disclose and analyze impacts on Steller Sea Lions and other pinnipeds near the Bradwood Terminal. It repeats NMFS' contention that there appears to be a conflict in the final EIS between the statement that pinnipeds are likely in transit to more favorable feeding grounds upstream with the observation of a foraging sea lion at the terminal.

Commission Response

81. Riverkeeper's request for rehearing misconstrues the comments of the NMFS on the final EIS and takes those comments out of context. For example, the NMFS did not contend that the final EIS failed to address sea turtles, but instead pointed out that additional information exists about sea turtle strandings in Washington and Oregon. The intent of the NMFS comments was to strengthen the Commission's BA and EFH Assessment. Sections 4.5 (Aquatic Resources) and 4.6 (Federally Listed, Threatened and Endangered Species and Other Special Status Species, Marine Mammals) of the final EIS contain analysis of potential impacts from construction and operation of the Bradwood Project on marine mammals and sea turtles potentially found in the project area.

82. We also disagree with Riverkeeper's contention that the final EIS did not rely on current science to assess potential impacts on certain marine mammal species. In its July 14, 2008 comment on our final EIS, the NMFS pointed out that there are newly-released data for some species of marine mammals, including a final Recovery Plan for Southern Resident Killer Whales, a Revised Recovery Plan for Stellar Sea Lions, and a Sock Assessment Report for the Eastern North Pacific Gray Whale. Sources used by Commission staff to develop section 4.6.1 of the final EIS for the Southern Resident Killer Whale and Steller Sea Lion dated from 2002 through 2007. The new information

referred to by the NMFS does not significantly alter the status of the species being described. However, it should be noted that these newly available plans will be used by staff in the development of our revised BA and EFH Assessment. We disagree with NMFS' comment that data on the closest haulouts for harbor seals were missing from our analysis. This information was included in section 4.6.1.3 of the final EIS, p. 4-225.

83. We also stand by the finding that pinnipeds present near the Bradwood Terminal are likely in transit to more favorable feeding grounds upstream. While pinnipeds are known to forage in the Columbia River within the project area (final EIS section 4.6.1.1, p. 4-212; section 4.6.2.2, p. 4-270) and one sea lion (of unknown species) has been observed foraging near the terminal site, this location has not been documented as a preferred foraging site. In contrast, there are numerous observations of pinnipeds hauling out and/or foraging both upstream and downstream of the Bradwood Terminal (Jeffries et al., 2000). Therefore, we affirm the final EIS' finding that pinnipeds present near the terminal are likely in transit to more favorable feeding grounds.

84. The Commission also finds that the mitigation measures to limit noise impacts on marine mammals are sufficient. The final EIS table 4.6.2-1 describes mitigation measures for noise impacts due to construction activities. Further, conditions 31 and 37 of the September 18 Order require NorthernStar to coordinate with the NMFS to develop plans to address impacts from noise on marine mammals due to pile driving and blasting activities, which have the potential to cause harassment to pinnipeds from either airborne or underwater noise. NorthernStar submitted its Draft Incidental Harassment Authorization Application to the NMFS on September 10, 2008.

85. The final EIS addressed the potential of LNG carriers to strike whales at sections 4.5.1.1 and 4.6.2.1. In condition 37 of the September 18 Order, we are requiring that NorthernStar further coordinate with NMFS to determine the appropriate LNG carrier speed and seasonal restrictions to minimize impacts on whales from potential vessel strikes. NorthernStar disclosed the anticipated speed of LNG carriers in the waterway for LNG marine traffic to the Bradwood Terminal in filings made on August 15 and October 3, 2008. In a filing submitted on November 25, 2008, NorthernStar documented that it has been consulting with the NMFS on the issue of whale strikes.

5. Wake Stranding and Other Activities

86. Several parties contend that the final EIS has insufficient information to determine the cumulative impacts of increased vessel traffic on the wake stranding of juvenile salmonids or to conclude that the impacts will be limited or can be mitigated.

87. Riverkeeper states that other project activities that will impact salmonids and other aquatic species are left unexamined, including fuel and oil spills from tankers during transit, shoreline erosion from propeller wash, and other activities that are identified at paragraph 112 of the September 18 Order.

Commission Response

88. The final EIS contains ample analyses of information about cumulative impacts that increased vessel traffic may have on wake strandings of juvenile salmonids. Section 4.5.1.1 of the final EIS, p. 4-137, acknowledges that LNG carriers transiting the lower Columbia River over the operational life of the Bradwood Project are likely to result in the stranding of some sub-yearling fish. However, as noted in section 4.12.5 of the final EIS, even with cumulative impacts from other reasonably foreseeable projects, shipping activity within the Columbia River is expected to remain below historic levels. In addition, if the proposed Oregon LNG Project is authorized and operated, it would increase future LNG carrier traffic. However, the Oregon LNG Project is proposed to be located in the wide portion of the lower Columbia River at Warrenton in an area where ship wakes are unlikely to cause the stranding of juvenile fish based on the six factors described in the final EIS, p. 4-136.

89. The final EIS contains data to support the determination that wake strandings resulting from the Bradwood Project would be limited and impacts can be mitigated. As described in section 4.5.1.1, there is only one record of wake stranding (on Tenasillahe Island at about River Mile 37) in the portion of the river downstream of the proposed Bradwood Terminal. There appear to be important differences in the lowermost 38 miles of the Columbia River compared with the portions of the river above the Bradwood Terminal. The lower part of the river is broader and distances from the navigation channel to beaches are generally greater than in the upriver segment. The sampled densities of juvenile salmon are less in the lower Columbia River shallows. In addition, the effects of tides, currents, and winds may be more variable in the lower Columbia River. In an October 3, 2008 filing, NorthernStar indicated that LNG carriers would be traveling at a speed of about 3.5 knots when passing by Tenasillahe Island. Therefore, despite the fact that the LNG carriers would pass Tenasillahe Island at the location where a stranding has been reported, the carriers would be slowing on final approach to the Bradwood Terminal, greatly diminishing the likelihood of wake stranding. To address the parties comment relating to mitigation of wake stranding impacts, condition 13 of the September 18 Order requires that NorthernStar continue to consult with the COE, FWS, NMFS, Oregon DFW, Oregon Department of State Lands, Ecology, and other appropriate resource agencies, to finalize its Compensatory Mitigation Plan. The Commission would not allow construction of the project to begin until the final Compensatory Mitigation Plan, along with agency comments and appropriate approvals, has been filed with the Secretary. This requirement, along with completion of formal consultations under the ESA, as required by condition 43 of the Commission's September 18 Order, assures that potential impacts on juvenile salmonids from wake stranding can and would be mitigated.

90. In response to Riverkeeper's comment that the final EIS for the Bradwood Project did not examine potential impacts on salmonids and other aquatic species resulting from

LNG carrier fuel and oil spills while in transit to the terminal, we note that section 4.5.1.1 of the final EIS, p. 4-139 includes an analysis of potential impacts on aquatic species due to a release of LNG or fuel along the LNG transit route. The discussion in this section of the final EIS was not extensive because we found that, with the implementation of required safety and mitigation measures, the release of LNG or fuel is highly unlikely to occur.

E. Impacts on Treaty-Reserved Fishing Rights

91. The Tribes contend that the final EIS for the Bradwood Project failed to analyze tribal treaty-reserved fishing rights. The 1855 Treaties between the United States and the Nez Perce Tribe[64] and the CTUIR,[65] protect the Tribes' rights to take fish at usual and accustomed places. The Tribes state that these treaties impose a duty upon others to refrain from diminishing the number of fish that would otherwise return or pass through the Tribes' fishing places.[66] The Tribes assert that the final EIS contains no information about how many fish could be harmed or killed by the project, impacts on its members' subsistence and commercial fisheries, or the health effects on tribal members who consume fish that have been exposed to contaminants caused by dredging for the project.

Commission Response

92. The final EIS addresses tribal fishing rights at section 4.8.1.7 and concludes that the Bradwood Project would not have significant adverse impacts on tribal commercial or subsistence fishing. As explained in sections 4.7.1.4 and 4.8.1.7 of the final EIS, LNG marine traffic in the waterway to the terminal would only temporarily affect other river

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[64] *Citing* the Treaty of June 11, 1855; 12 Stat 957 (1855) which reserves for the Nez Perce Tribe:

> the right of taking fish at all usual and accustomed places in common with the citizens of the Territory; and or erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon the open and unclaimed land…

[65] *Citing* the Treaty of June 9, 1855; 12 Stat 957 (1855) which reserves fishing rights for the CTUIR with nearly identical language.

[66] *Citing United States v. State of Washington, et al.*, CV No. 9213RSM, 2007 WL 2437166 at *1 (W.D. Wash., Aug. 22, 2007); *State of Washington v. Washington State Commercial Passenger Fishing Vessel Association, (Passenger Fishing Vessel)*, 443 U.S. 658 (1979).

users, and fishing boats could move out of the way of LNG carriers just as they currently avoid other deep draft ships using the lower Columbia River. While the project area is not considered a "usual and accustomed" fishing place for the Nez Perce or CTUIR,[67] there is no evidence showing that the Bradwood Project would impede fish travelling upriver past the LNG terminal to the locations where the Inter-tribal Commission's members do have fishing places or otherwise cause anadromous runs to be diminished. Instead, it is possible that the Salmon Enhancement Initiative proposed by NorthernStar may actually increase the numbers of salmonids in the lower Columbia River. Further, there is no evidence that fish will be contaminated from dredging of the proposed terminal turning basin. As discussed in section 4.2.2.2 of the final EIS, NorthernStar conducted testing of the sediments in the Columbia River bottom that would be disturbed during dredging of its turning basin. Chemical analysis of collected samples revealed no contaminants in concentrations above threshold levels that could be harmful to human health, and all inorganic and organic compounds identified in the samples were below levels the NMFS consider harmful to aquatic species.

93. Sections 4.5 and 4.6 of the final EIS address potential impacts on fish resulting from the project, including federally listed threatened and endangered salmonid species. The final EIS discusses measures NorthernStar would implement to reduce impacts on aquatic resources, such as erosion control, screening of water intake at the terminal, use of HDDs under specific waterbodies along the pipeline route, and the restoration of habitat under its Compensatory Mitigation Plan. In addition, our September 18 Order contains a number of specific environmental conditions (e.g., conditions 18, 21, 22, 23, 25, 29, 31, 32, 33, 34, and 35) to further mitigate impacts on fish to less than significant levels. Commission staff is currently revising the BA and EFH Assessment to include information from additional studies and data filed by NorthernStar in response to our conditions. That document will include more detailed analyses of project impacts on fish, and fuller descriptions of mitigation measures to reduce those impacts. While the Commission has not estimated the number of fish that could be harmed or killed by the Bradwood Project, that is not our regulatory responsibility under either NEPA or the ESA. The final EIS adequately identified and evaluated the possible impacts on fish and other species. Under section 7 of the ESA, it is the responsibility of the action agency to use the best available science to determine potential impacts on federally listed species resulting from the proposed action. As indicated in our March 2007 BA and the final EIS, we concluded that the Bradwood Project is likely to adversely effect 13 subpopulations of salmonids. However it is the responsibility of the FWS and NMFS to determine a "take" for a species in their BOs, in response to our BA.

[67] This region was the historical homeland of the lower Chinook Nation and the Cowlitz Tribe (final EIS at sections 4.9.1.2 and 4.9.1.3).

F. Government-to-Government Consultation

94. The Tribes state that the Commission has not consulted with the Tribes in a meaningful way with respect to their sovereign status and authority as co-managers of the treaty resources in the Columbia River. The Tribes define consultation as the formal process of negotiation, cooperation and mutual decision-making and state that no such consultation has occurred with the Tribes. They state that the Commission failed to meet with Tribal officials at the appropriate level to discuss this project and obtain an understanding of the Tribes' concerns.

Commission Response

95. We recognize the unique relationship between the United States and Indian tribes as defined by treaties, statutes, and judicial decisions. We carry out our responsibilities in the context of the Federal Power Act, Natural Gas Act, and other statutes that govern the Commission's actions. Throughout this proceeding, we have taken the Tribe's concerns into account, including potential impacts on fish and on the tribe's rights and interests (see September 18 Order at paragraphs 143-145).

96. The tribes have been active participants at every stage of the proceeding, and our consultations with Indian tribes that have an interest in the project area are documented in the final EIS at section 4.9.3. In keeping with our policy that consultations should involve direct contact between the agency and tribes, the Commission sent copies of its Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Bradwood Landing LNG Project to the executive director and staff of the Inter-Tribal Commission, chair and attorney for the Nez Perce Tribe, and chair and natural resources specialist for the CTUIR. In addition, we sent copies of the draft and final EIS to the Inter-tribal Commission, Nez Perce Tribe, and CTUIR. Representatives of the Inter-tribal Commission and Nez Perce Tribe have attended interagency meetings with Commission staff. Lastly, Commission staff made a presentation to the Inter-tribal Commission, including members of the Nez Perce tribal council. Because Commission staff had direct contacts with the Tribes, and we considered the Tribes' concerns in the final EIS and the September 18 Order, the Commission has followed its policy, and fulfilled its obligations to consult in good faith.

G. Public Safety and Emergency Preparedness

97. A number of parties assert that the Commission failed to take a hard look at the danger posed by LNG tankers to human safety and the environment. Oregon comments that although the September 18 Order contains numerous conditions related to the design of the terminal, it does not contain a single condition specifically related to the safe operation of the terminal. Oregon contends that the Commission ignores or minimizes the threat of a terrorist attack by simply reciting that there have been no major accidents involving an LNG carrier in recent years. Oregon maintains that the Commission has

been unresponsive to parties' concerns regarding emergency planning for the facility and fails to include within the order an enforceable mechanism or permit conditions that ensure the final Bradwood Emergency Response Plan meets state standards or the intent of the order. Oregon lists a number of requirements that should have been included in the Commission's Order.

98. Riverkeeper specifies that the Commission has not analyzed the risks of a full LNG tanker breach and used inadequate modeling to address the risk of a catastrophic spill. Although the Coast Guard recommends a 500-yard moving safety/security zone to ensure the safety of people and structures, the Commission recognizes that LNG tankers will come within 100 yards of the shore, making it impossible to ensure that the safety/security zone will be maintained while the LNG tanker is passing populated shorelines. Riverkeeper comments that the extent of human casualties resulting from a tanker breach at different locations along the shipping route, for example under the Astoria Megler Bridge, near Astoria, near rural areas, and at berth, has yet to be examined.

99. Riverkeeper states that the risk and consequences of a cascading failure of an entire LNG tanker due to a full tanker breach is not analyzed. It explains that the cryogenic temperatures of LNG will cool materials it contacts so quickly that they often fracture, so that an LNG spill may result in cascading failures which can cause the LNG to ignite with an associated fire that could devastate surrounding communities. It adds that the Commission did not analyze the potential of cascading failures due to melting of polystyrene foam that is used as insulation on LNG tankers even though a current study concludes that the current regulatory requirements are inadequate to prevent tank rupture in such cases.[68] Although the Commission examined the breach of some LNG tankers, those analyzed are significantly smaller (140,000 m^3) and are unrepresentative of the much larger LNG tankers that the Bradwood Project will use (200,000 m^3 up to a possible 260,000 m^3).

100. The risk to humans and the community is discounted, asserts Riverkeeper, by the Commission's faulty reliance on the Dense Gas Dispersion model (DEGADIS) to analyze the dispersion rate of LNG vapor (final EIS, p. 4-468). Rather, Riverkeeper states that the Commission's regulations require that the FEM3A model be used to account for additional cloud dilution.[69] Riverkeeper further states that the Commission incorrectly relied on design spill from a 6-inch diameter recycle line, instead of the 32-

[68] *Citing* Jerry Havens, James Venart, Fire performance of LNG carriers insulated with polystyrene foam, Journal of Hazardous Materials, Vol. 158, Issues 2-3, pages 273-279 (October 30, 2008).

[69] 49 C.F.R. § 193.2059(a).

inch diameter transfer line to which it is attached that will actually carry the LNG to the onshore tanks (final EIS, pp. 4-462, 4-464 and 4-468). Riverkeeper states that the Commission's modeling improperly assumes no air/methane mixture in any spill impoundment in the event of a breach of the onshore LNG tanks or inlet or outlet lines, an assumption that they state is inconsistent with relevant field studies of the issues.[70]

101. Ecology asserts that the Commission failed to analyze potential costs of preparedness for a natural gas pipeline explosion in Cowlitz County, as well as the cost to prepare for and respond to a vessel accident that has consequences in Pacific, Wahkiakum, or Cowlitz Counties. Ecology claims that the final EIS did not evaluate equipment and funds necessary to respond to an emergency, including staffing and training levels for fire suppression of a vessel fire, and staffing and training for law enforcement assistance to control water traffic during LNG vessel transit on the Columbia River.

Commission Response

102. Safety issues, including accidental releases and terrorist attacks, related to both the onshore and offshore aspects of the project were considered during the engineering review done by Commission staff, as well as the waterway suitability review performed by the Coast Guard. As discussed in the final EIS, staff performed a technical review of the proposed facility which emphasized the engineering design and safety concepts, as well as the projected operational reliability of the proposed facilities. As a result of this review, environmental conditions 71 to 109 in Appendix B of the order specifically deal with the reliability, operability, and safety of the proposed terminal.

103. The Coast Guard's Navigation and Vessel Inspection Circular (NVIC) 05-05 establishes a process by which the Coast Guard, in conjunction with stakeholders at the port, can address safety and security issues related to the marine transportation of LNG to a proposed facility. In accordance with NVIC 05-05, the Coast Guard, with input from the Area Maritime Security Committee, local law enforcement, and emergency response organizations, evaluated the risks posed by LNG shipments and determined whether port-specific prevention and mitigation measures could be implemented to adequately safeguard these shipments. This review included evaluating high population density areas and infrastructure, such as Astoria and the Astoria Megler Bridge. The Coast Guard's Waterway Suitability Report (WSR), dated February 28, 2007, advised the Commission that the Columbia River could be made suitable for the LNG marine traffic associated with the Bradwood Project if specific risk mitigation measures were put into place. These measures are detailed in the WSR and in section 4.11.5.5 of the final EIS.

[70] *Citing* Gas Research Institute's Falcon Series Data Report on the 1987 LNG Vapor Barrier Verification Field Trials.

Because the Coast Guard's determination in the WSR is contingent on the availability of Coast Guard as well as other safety and security resources to implement the additional mitigation measures, the order contained environmental condition 105 to require NorthernStar to ensure that the facility, and any LNG vessel transiting to and from the facility, comply with all requirements set forth by the Coast Guard, including all risk mitigation measures recommended in the WSR. These requirements include the development of a Coast Guard-approved Vessel Transit Management Plan which would include appropriate security measures along the shoreline.

104. Both the Coast Guard's and staff's review used the report "Guidance on Risk Analysis and Safety Implications for a Large Liquefied Natural Gas Spill Over Water (SAND2004-6258)," issued in 2004 by the U.S. Department of Energy's Sandia National Laboratories, as a basis for evaluating the risks associated with LNG marine traffic. In this report, Sandia National Laboratories concluded that, while possible under certain conditions, cascading events are not likely to involve more than two or three cargo tanks. As stated in the final EIS, these events would not be expected to increase the overall fire hazard by more than 20 to 30 percent, but would increase the expected fire duration. This conclusion was also reached by Sandia National Laboratories in the report "Breach and Safety Analysis of Spills Over Water from Large Liquefied Natural Gas Carriers (SAND2008-3153)," issued in 2008.

105. As stated in section 4.11.5.3 of the final EIS, NorthernStar proposes to receive LNG carriers with capacities up to 200,000 m^3. However, as stated in its WSR, the Coast Guard has prohibited the facility from receiving vessels with a cargo capacity greater than 148,000 m^3 until additional analysis addressing vessels with higher cargo capacities is completed. The 2008 Sandia report examined LNG carriers larger than 200,000 m^3 and concluded that hazard distances for larger LNG carriers are approximately 7-8 percent greater than the results presented in the 2004 Sandia report. Even with the increase in distance, the Sandia report stated that the most significant impacts to public safety and property remain within approximately 500 meters of a spill with lower impacts at distances beyond approximately 1,600 meters. These are the same distances considered by the Coast Guard during preparation of the WSR.

106. The DOT regulations under 49 C.F.R. § 193.2059 allow use of either the DEGADIS or FEM3A models. We agree that DEGADIS does not account for any holdup of LNG vapor by dikes or other obstructions to flow. However, the additional cloud dilution caused by flow patterns induced by tanks, berms, and dikes creates shorter dispersion distances. While FEM3A may more realistically depict terrain and actual geometries, the vapor dispersion calculations using DEGADIS, as discussed in the final EIS, did not account for this dilution and so provide longer, more conservative dispersion distances. However, the method used to calculate the source strength cannot account for "wind scooping" and vapor expansion/interaction effects within the impoundment that may produce higher initial source strengths and longer dispersion distances. As

discussed in the final EIS, the vapor production model was adjusted to eliminate all vapor retention and used the resulting source production curve as input to DEGADIS to investigate the possible effects to the calculations. Although the exclusion zones associated with the onshore facility would be larger using this method, they would still not extend beyond the facility property line onto any adjacent land.

107. The selection of the design spill for the marine transfer system was based on a project specific analysis to identify all small diameter attachments to the transfer piping in order to determine the largest spill rate. This process was developed in consultation with the DOT, which promulgated the federal regulations under Title 49 C.F.R. Part 193.[71]

108. Environmental condition 77 of the September 18 Order, which requires NorthernStar's Emergency Response Plan to be reviewed and approved by the Commission, provides an enforceable mechanism for addressing emergency response planning. The Energy Policy Act of 2005, the DOT regulations under Title 49, C.F.R., Part 193, and the Commission's order require NorthernStar to consult and coordinate with the appropriate agencies in developing the Emergency Response Plan. In reviewing these plans for other projects, Commission practice has been to require the applicant to provide correspondence with stakeholders such as the Coast Guard Captain of the Port; state and county local emergency planning commissions; state and local law enforcement agencies; and local fire departments to document their consultation in developing the Emergency Response Plan. The Emergency Response Plan considerations raised by Oregon would be addressed during this consultation process.

109. In addition, condition 78 requires the Emergency Response Plan to include a Cost-Sharing Plan identifying the mechanisms for funding all project-specific security/emergency management costs that would be imposed on state and local agencies. In addition to the funding of direct transit related security/emergency management costs, this comprehensive plan is to include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base.

110. As discussed in the September 18 Order, Commission staff conducted an engineering design review of the facility in order to assess the design and operational measures for addressing the potential events which could create an off-site hazard and impact public safety. This evaluation resulted in recommended design changes and procedures to improve the safety and reliability of the facility. In addition, the Emergency Response Plan and the Cost Sharing Plan cannot be approved and project

[71] The April 19, 2005 and May 6, 2005 letters between the Commission and the DOT regarding design spill sizing are available, respectively, in eLibrary under accession numbers 20050615-0176 and 20050615-0177.

construction will not be allowed to commence in the absence of appropriate security/emergency response resources or funding. Authorization to commence construction will not be issued until the conditions requiring pre-construction approval have been satisfied. As a result, we believe that the LNG terminal would be constructed and operated in a manner that does not impact public safety.

H. Geologic Hazards

111. Parties comment that the final EIS does not adequately analyze the potential for landslides along proposed pipeline routes and does not have enough information to determine appropriate mitigation. Ecology states that the final EIS should consider worst case scenarios when evaluating landslide potential for areas that are proposed for the route, but that have not yet been surveyed. Further, Ecology argues that landslide areas routing plans and alternatives are not sufficiently defined and evaluated and pipeline integrity management is not adequately evaluated in the final EIS.

Commission Response

112. We have reviewed landslide hazards along the proposed pipeline route sufficiently to determine where detailed design measures will be required prior to construction. The Commission will review additional geotechnical field investigations and detailed design measures to mitigate and minimize the effect of landslide hazards on the pipeline as well as taking the necessary and appropriate precautions to minimize the effects of construction activities on the landslide potential.

113. Specifically, NorthernStar will be required to conduct additional studies and file a Final Pipeline Design Geotechnical Report with site-specific mitigation measures which will be available for public review, subject to review by the Board of Consultants (*see* condition 16 in Appendix B of the Commission's September 18 Order) and final approval by the Director of OEP prior to authorization being granted to commence construction. Any necessary pipeline route relocations would be subject to condition 6 of the September 18 Order. Integrity Management throughout the life of the facility will be subject to the rules and requirements of the DOT. FERC's routing analyses and construction requirements for dealing with landslides and other geological hazards seek to ensure that the pipeline company minimizes the likelihood of any catastrophic failures.

I. Socioeconomic Impacts

114. Several parties state that the Commission failed to analyze and address the impacts to shipping, fishing, recreational boating, and other river uses. Riverkeeper submits that dredging the proposed turning basin would block access to Clifton Channel, a commercial and recreation fishing area. They further contend that operation of the Bradwood Terminal would harm river commerce, because LNG carriers would have security zones around them. Riverkeeper claims that that final EIS failed to address

negative impacts on Astoria's tourist-based economy due to disruptions from the moving security zones around LNG carriers as they move past the waterfront. It is also concerned that LNG carriers and fishing boats will compete for space around Buoy 10, which is a popular fishing spot. Ecology requests modeling of ship traffic to analyze the socioeconomic impacts of shipping delays. Riverkeeper adds that the Commission's analysis is incomplete because it lacks a complete LNG Vessel Traffic Management Plan.

Commission Response

115. The Bradwood Project impacts to shipping, fishing, recreational boating, and other river uses are analyzed at section 4.8.1.7 of the final EIS. That discussion contains potential impacts on other river traffic from LNG carriers transiting the waterway including on commercial ship traffic transiting to and from ports located upriver from the proposed LNG terminal. Based on our analysis, we believe that LNG carriers would not significantly impede other river traffic. As stated in section 4.8.1.7 of the EIS at 4-366, the Coast Guard's moving safety/security and moored vessel security zones would not be treated as absolute exclusion zones that would preclude all other vessel movements. The security zones would not necessarily require that boats move away from the LNG carriers, but rather are intended to establish the Coast Guard's authority in the area surrounding the LNG vessel to ensure safety during the transit and mooring. Neither dredging of the turning basin during construction of the terminal nor the presence of LNG carriers at dock during operation of the terminal would prevent recreational or fishing boats from accessing Clifton Channel. Boaters would merely need to go around the dredges, and avoid the terminal wharf, and the Columbia River is wide enough at these locations for this to occur.

116. Section 4.12.4 of the final EIS, p. 4-510 acknowledges that the lower Columbia River has high levels of recreational and commercial fishing; however, because recreational users of the Columbia River have always had to account for commercial ship traffic, no significant additional cumulative impacts on these activities are likely. This logic also applies to the salmon fishery at Buoy 10; although the project would result in an annual increase of 125 LNG carriers transiting to and from the Bradwood Terminal, ship traffic would remain below historic levels. The LNG ship traffic is expected to have impacts similar to other ship traffic relative to recreational and commercial fishing.

117. Potential impacts on cruise ships in Astoria and other tourism-related business are discussed in section 4.8.1.8 of the final EIS. With the implementation of the conditions of the Coast Guard's WSR, included as Appendix G to our final EIS, the potential for LNG marine traffic in the waterway to adversely affect cruise ships traveling to or docking at Astoria is extremely remote. In addition, we find no evidence that the project would have negative impacts on tourism in the region, and our analysis in sections 4.8.1.4, 4.8.2.4, and 4.8.3.4 of the final EIS indicates that the project may have benefits for the local economy.

118. Section 4.8.1.7 of our final EIS addressed potential impacts on other commercial ship traffic. The EIS discussed the Columbia River Channel Analysis of Vessel Arrival Patterns conducted for NorthernStar. We also disclosed that NorthernStar had filed a proposal for navigation protocols and priorities that would minimize delays for other commercial vessels. In addition, the conditions for the Coast Guard's WSR would reduce impacts on other commercial ships using the lower Columbia River. One of those conditions requires NorthernStar to produce a Vessel Transit Management Plan. The Coast Guard is the agency responsible for safety and security for vessels using the waterway. Therefore, the Coast Guard would be responsible for implementing the conditions it may impose in its Letter of Recommendation for this project.

J. Air Quality

119. While the final EIS indicates the level of air emissions from the LNG tankers, tugs and security vessels and terminal operations, the parties state that no analysis is included to allow conclusions to be reached or mitigation measures to be imposed. Riverkeeper states that the estimated emissions, a statement of compliance with federal and state ambient air quality standards, and listings of the applicable regulatory requirements are the sum of the final EIS' disclosure of air quality impacts.

120. Riverkeeper states that there is no disclosure of how this increase in regional air pollution will effect the environment or public health and welfare; instead, it argues, the final EIS depends on compliance with the National Air Quality Standards (NAAQS) and state ambient standards to demonstrate a lack of significant impacts on human health or the air environment from air emissions. Riverkeeper further contends that the September 18 Order was non-responsive to this concern because the order referenced final EIS section 4.10.1, which does not contain information on the ambient levels of air pollution after the project is completed or the health impacts of those pollutants.

121. Riverkeeper asserts that compliance with NAAQS does not replace full and accurate disclosure of air pollution impacts;[72] moreover, it contends, NEPA instructs agencies to consider whether the action violates Federal, state, or local law as just one of ten factors to be indicative of the severity.[73] It also notes that the NAAQS are outdated and underprotective because (a) EPA does not review them every five years as required; (b) certain EPA decisions regarding NAAQS may be more political than science-based; and (c) for some pollutants there is no level under which the population will experience no impacts.

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[72] *Citing Edwardsen v. U.S. Dep't of the Interior*, 268 F.3d 781, 789 (9th Cir. 2001).

[73] *Citing* 40 C.F.R. § 1508.8(b).

122. Riverkeeper points to the cases of carbon monoxide (CO2), particulate matter (PM), sulfur dioxide (SO2) and nitrogen oxides (NO2). It notes that the EPA has not reviewed the CO2 NAAQS since 1994 and that since 2000 at least three studies have confirmed that CO2 is associated with low birthrate at ambient concentrations significantly lower than the current CO2 NAAQS of 9ppm over 8 hours and 35 ppm over one hour. To address the threat to pregnant mothers and fetuses, Riverkeeper states that other regulatory agencies have chosen more protective standards. For example, Riverkeeper asserts, the World Health Organization (WHO) contains a lower 1 hour standard, 26.1 ppm, a 30 minute limit of (52.3 ppm) and 15 minute limit of 87.1 ppm.[74]

123. Oregon notes that energy facilities in the state are required to provide an analysis of their carbon footprint and how they might offset that impact but that the Commission failed to include specific conditions controlling how NorthernStar would manage the CO2. Oregon asserts that this oversight may hinder Oregon's ability to meet greenhouse gas (GHG) emissions targets to meet 1990 levels of GHG by 2020. It adds that the Commission provides scant analysis regarding LNG's greater CO2 footprint than domestic supplies of natural gas. Oregon states that the Commission's inclusion of carbon sequestration in the discussion of CO2 management is not only premature because the technology has yet to be proven but because, if viable, it would be applicable to a combustion process regardless of fuel type and so should not be used to demonstrate how "clean" coal can be.

124. Riverkeeper notes that PM pollution is a non-threshold pollutant that has adverse health impacts at any level.[75] As such, Riverkeeper states the EPA NAAQS were unable to discern a threshold level of pollution under which death and disease associated with PM would not occur, but that studies reviewed by the EPA revealed an almost linear relationship between diseases like cancer and the amount of fine PM in the ambient air.[76]

125. Similarly, Riverkeeper maintains, NO2 contributes to respiratory problems, particularly for children and the elderly. Although the NAAQS for NO2 have not changed since 1971, the EPA was challenged over its 1996 decision to retain the existing primary NAAQS for SO2 and the court remanded the NAAQS for further explanation,[77] which the EPA has yet to address. In addition to health impacts, Riverkeeper states that

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[74] World Health Organization, Air Quality Guidelines for Europe, 2nd ed. (WHO regional publication, European series, No. 91, 2000) at Ch.3, p. 2.

[75] 71 Fed. Reg. 2620 (Jan. 17, 2006).

[76] *Id*. at 2635.

[77] *American Lung Association*, 134 F.3d 388 (D.C. Cir. 1998).

SO2 emissions travel and contribute to visibility impairments in many scenic areas, and also have an adverse impact on vegetation, including important agricultural crops – at levels below the current NAAQS.

126. With regard to NO2, Riverkeeper contends, NAAQS have not been updated since 1993 and evidence exists that NO2 levels that meet current standards may cause adverse effects on human health. For example, Riverkeeper states, NO2 has been linked to Sudden Infant Death Syndrome,[78] asthma attacks, respiratory tract syndrome, bronchitis, and decreased lung function.[79] Further, it maintains, increasing evidence regarding the adverse impacts of NO2 pollution has prompted the State of California to enact ambient NO2 limitations stricter than the federal NAAQS.[80]

127. In sum, Riverkeeper states that the EPA's failure to revise its NAAQS or provide evidence that the current standard protects human health, along with scientific literature that demonstrates that the standard is not protective of human health and welfare, and the existence of more protective standards that other regulatory agencies have found necessary to protect public health, contradict the Commission's conclusion that compliance with the current NAAQS indicates no significant impacts on health and welfare and so violate NEPA.

128. Riverkeeper further disputes the final EIS' finding that there will be no "significant long-term air quality impacts" because the emissions from marine vessel traffic would be "periodic and transient" (final EIS at 5-7). Riverkeeper submits that one tanker coming into harbor emits the same smog-forming emissions as 350,000 new cars – and that ocean going vessels can have power capacities similar to power plants.[81] Likewise, Riverkeeper states there is no evidence behind the claim that "[i]t is not currently feasible to exactly model air quality impacts from combined LNG carrier traffic due to the complexity of modeling moving LNG carriers, changing topography along the river, and microclimates along the waterway (final EIS at 4-514-15). Riverkeeper states that adequate modeling has yet to be performed to demonstrate that affected areas will actually attain and maintain the NAAQS.

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[78] *Citing* Dales, Robert et al., *Air Pollution and Sudden Infant Death Syndrome*, Pediatrics, 2004: 113: 628-31, at 629.

[79] *Citing* Committee on Environmental Health at 1701.

[80] Ca. Code. Regs. tit. 17, § 70200.

[81] *Citing generally* Anthony Fournier, *Controlling Air Emissions from Marine Vessels: Problems and Opportunities* (2006).

Commission Response

129. Although Riverkeeper properly points out that the NAAQS have not been updated by the EPA, comments on the adequacy of the NAAQS is simply not within the scope of the EIS. The Congress directed the EPA, through the Clean Air Act, to establish Primary NAAQS to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly and Secondary NAAQS to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

130. The Commission's environmental staff should not be expected to determine new standards for air quality that would override the expertise and authority granted by Congress to the EPA to determine air quality standards. Should the State of Oregon decide that NAAQS are not sufficiently protective of air quality, under the CAA, the state has full authority to promulgate state-specific rules on ambient air quality.

131. Although we conclude that there will be no significant impacts, we concede that any burning of fossil fuels may contribute to a degradation of local and regional air quality. The impacts to local ambient air quality have been fully detailed within the final EIS. The detailed air quality modeling indicates that the greatest impacts to air quality happen in close proximity to the LNG terminal. On a regional and/or state level, the incremental air quality impacts due to the LNG terminal and vessels dramatically decrease based upon both distance and regional wind patterns.

132. In addition, we consulted with the US Forest Service and the National Parks Office to ensure that impacts at areas with special air quality designations (Class I areas) would not be significant. As detailed in the final EIS, we determined in consultation with these agencies that there would not be any significant impacts, although we again conceded that there would be some affect on visibility, and air quality related values within the Class I areas.

133. In addition, it is still our contention that air modeling of the LNG ships and support vessels enroute is not technically practicable. No EPA-approved air modeling programs allow modeling of a moving vessel along a linear path with varying topography and meteorological conditions. Although not addressed quantitatively, in our qualitative analysis we agree that residents and communities along the LNG ship route would have some increase in air pollution due to the LNG ship and support vessels. However, as stated previously, these impacts would be of very short duration.

K. Cumulative Impacts

134. NEPA requires that the cumulative effects analysis of a proposed action be considered. A cumulative effect is "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 regardless of what agency or person undertakes such other actions."[82]

135. Oregon asserts that while the final EIS for the Bradwood Project contains a table summarizing cumulative effects in broad terms, it does not offer quantified or detailed data about these effects (final EIS, pp. 4-501-02). Even if the Commission is unable to indicate with any great degree of certainty the results of various projects, Oregon states that the Commission may not rely on a statement of uncertainty to avoid even attempting the analysis.[83]

136. Oregon asserts that the neglected cumulative impacts are: dredging 24 hours a day for up to 72 days; toxic sediment transport; the operation of the federal Columbia River Power System and its effect on the changes to the flow regimes and sediment transport; the Columbia River Channel Deepening Project; several pipeline crossings within particular watersheds, and the cumulative impact of all stream crossings on the already elevated water temperature of the Columbia River.

137. Oregon lists expansion of the Bradwood Project as a foreseeable future action that has not been examined even though NorthernStar states that expansion will be necessary to make the project viable (final EIS, p. 3-56). Similarly, Oregon states that neither the lateral pipelines nor facilities not under the Commission's jurisdiction are taken into account in the cumulative analysis, nor are the impacts of water withdrawals from all interacting sources, especially their effect on groundwater.

138. Riverkeeper and the Tribes state that the final EIS fails to consider the cumulative environmental effects of the foreseeable Palomar Gas Transmission, LLC pipeline project (Palomar Project) which is in the Commission's pre-filing process. As recognized in the final EIS, a segment of the Palomar Project would interconnect with the proposed Bradwood Terminal near Wauna, Oregon and provide a second sendout pipeline (final EIS, p. 3-13). While the final EIS addresses the cumulative impacts of the Palomar Project, the parties assert that it does not analyze the impacts of the two projects on aquatic resources; it ignores that the Palomar Project would construct a 211-mile long, 36-inch diameter pipeline which would cross the Deschutes and Willamette rivers (both major tributaries of the Columbia River), the Clackamas and Molalla rivers as well as dozens of other streams and waters that ultimately drain into the Columbia River. The Tribes argue that, because spawning adult salmonids would pass the Bradwood Project on their way to spawn upstream of the Columbia River in streams impacted by the Palomar Project and, in turn, juvenile salmonids would make their way from those

[82] 40 C.F.R. § 1508.7.

[83] *Citing ONRC Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007).

streams back down through that same area, the cumulative impacts of both projects on anadromous fish should have been considered in the final EIS.

139. Additionally, the Tribes submit that the Bradwood Project's impact on salmon must be evaluated in light of the cumulative ecological stress that salmon already face due to the already degraded state of fish habitat; the effects of Columbia River dams which increase water temperature, decrease dissolved oxygen and flow and decrease the amount of habitat; and other upstream uses, such as pollution from agriculture, forestry and industry, as well as the Columbia River channel deepening project.

Commission Response

140. The Commission believes the cumulative impacts analysis in the final EIS is both quantified and detailed. Throughout section 4.12 of the final EIS, project-related impacts are presented in numerical terms for ship traffic, pipeline crossings, wetland acreages, impacted soil types and percentages, dredging volumes, protected species, forested areas and other land use types, view shed distances, water withdrawal volumes, employment and temporary housing estimates, local road traffic, and expected air emissions. These project impacts are further analyzed in comparison to, and in relation to, similar impacts from other, reasonably foreseeable projects, such as the Oregon LNG and Palomar Projects, along with many other projects noted in section 4.12 of the final EIS. In determining the degree to which these other projects could overlap to create cumulative impacts, the spatial and temporal characteristics of the other projects and the physical processes that govern these impacts were evaluated and discussed in the final EIS. Where practicable, impacts were further analyzed relative to baseline data from the project area as a means of determining significance, taking into account appropriate mitigation measures to minimize effects.

141. Dredging operations and sedimentation are addressed as part of the cumulative analysis in section 4.12.2. Specifically, the Columbia River Power System and Columbia River Channel Project were discussed in our EIS, as were other foreseeable pipeline projects in the region that may cross waterbodies and have cumulative impacts on sedimentation.

142. Oregon's contention that NorthernStar intends to expand its LNG terminal is speculative and is, therefore, not considered in the cumulative impacts analysis. In order to expand its facilities, NorthernStar would be required to submit another application to the Commission. Because it has not done so, we do not believe that expansion of the terminal is a reasonably foreseeable action. We note that most of the foreseeable projects included in section 4.12 of the final EIS are not subject to the Commission's jurisdiction and were identified through other sources.

143. In response to the Tribes we note that the cumulative impact analysis discusses potential aquatic impacts resulting from the Palomar Project. Section 4.12.2 addresses

cumulative impacts on waterbodies and wetlands from other projects such as Palomar, and section 4.12.3 discusses impacts on fisheries and aquatic species, such as salmonids. The final EIS further concludes that, provided both the Bradwood Project and the Palomar Project implement the Commission staff's Plan and Procedures as well as project-specific mitigation plans, cumulative impacts would be minimized. Further mitigation measures established by COE, ODSL, and WDE, in consultation with the ODFW, WDFW, NMFS and FWS, would also serve to minimize impacts from both the Palomar and Bradwood Projects.

L. Alternatives – Alternative LNG and Pipeline Proposals, No Action Alternative

144. NEPA provides that an EIS must contain a discussion of "alternatives to the proposed action," and "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."[84] The Commission must set out a statement that "briefly specif[ies] the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."[85]

145. Riverkeeper contends that by defining the project's purpose and need as "provid[ing] a new source of natural gas to the Pacific Northwest through importation of LNG" (final EIS, p. 1-4), the Commission narrowed the purpose and need for the project so much that it resulted in an inadequate range of alternatives.[86] By defining the purpose in this limited way, Riverkeeper submits that the Commission has eliminated consideration of domestic non-LNG alternatives that could meet the Pacific Northwest's future energy needs and also ignores the fact that imported LNG will be used to serve other markets, specifically California.

146. As for the determination that the Bradwood Project is needed to meet the need for increased future demand for natural gas in the Pacific Northwest, Riverkeeper states that the Commission relies upon three studies: (1) the Wood Mackenzie Limited (Wood Mackenzie) study;[87] (2) the ICF International study;[88] and (3) the Northwest Gas

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[84] 42 U.S.C. § 4332(2)(C)(iii), (E).

[85] 40 C.F.R. § 1502.13.

[86] *Citing Simmons v. U.S Army Corps. of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997).

[87] Wood MacKenzie Ltd., An Independent View of Markets Served by Bradwood Landing (July 2007).

Association (NWGA) study.[89] Riverkeeper contends that a closer review of these studies indicates that the project's sendout capacity of 1.3 Bcf per day is not needed to serve demand in the Pacific Northwest and that the project makes economic sense only if it is intended to provide access the Northern California markets.[90]

147. Oregon and Riverkeeper assert that the alternatives analysis in the EIS fails to incorporate accurate information about other projects that may provide gas at lower cost to the region – including a detailed comparative analysis of two other proposed regional LNG terminals and three interstate gas pipeline alternatives, all of which would serve to meet the purported need for natural gas in the Pacific Northwest and might be superior to the Bradwood Project from an economic, environmental and social perspective.

148. The parties state that the Commission accepted NorthernStar's assertion that over 80 percent of the project capacity would go to end-users in Oregon and Washington – but failed to determine whether the other projects might provide comparable volumes of gas and be viable alternatives. They contend that the Commission did not seriously consider the no-action alternative or the alternative of postponing action until an environmental analysis could be completed for other LNG or pipeline projects in the region to allow the Commission to conduct a comparative regional analysis. As to the consideration of renewable energy sources, the parties contend that the Commission should have bundled the conservation and alternative sources and examined them as a reasonable alternative rather than considering the energy each would produce separately and rejecting them.

149. While the Commission dismisses the possibility of micro-hydro projects as an alternative (final EIS, p. 3-8), Oregon notes that several of these projects are in the planning stages in Oregon. Instead of analyzing the alternatives of expanding or modifying the existing natural gas interstate pipeline systems, the parties contend that the Commission has dismissed them (final EIS, p. 3-12). For example, Oregon states that the discussion of the Palomar, Ruby and Bronco Projects at final EIS sections 3.1.2.2 and 5.1.12 find that these projects have no clear environmental advantage over the Bradwood Project without determining if the pipeline alternatives have more, less or the same environmental impacts.

150. The parties state that for the Palomar, Ruby, and Bronco Projects the Commission compares pipeline length to pipeline length, rather than project to project. This is in

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[88] ICF International, Review of Pipeline Utility Corridor Capacity and Distribution for Petroleum Fuels, Natural Gas and Biofuels in Southwest Washington (Nov. 16, 2007).

[89] Northwest Gas Association, Northwest Gas Outlook (Fall 2007).

[90] *Citing* ICF International at 60.

error, they argue, because, while the Bradwood Project may be shorter in length, its crossing of many sensitive wetlands and one of the nation's great waterways with multiple endangered species may have far greater impacts on water quality and beneficial uses than a much longer pipeline.

151. Given that the Commission intends to do independent environmental reviews of Palomar (final EIS, p. 3-13) and Ruby (final EIS, p. 3-14), the parties argue that there is no basis for rejecting these alternatives without presenting all the environmental impacts in comparative form.

152. The parties assert that the Commission should have analyzed what effect the proposed LNG import terminals on the West Coast of Mexico, particularly the recently constructed Costa Azul, and proposed LNG terminals for California, will have on the demand for gas in California, particularly whether it will relieve demand pressure in the Pacific Northwest.

153. The parties also argue that the final EIS rejects alternative LNG projects in Oregon without full comparative analysis of all their impacts. While noting that the Jordan Cove Energy LNG project has similar objectives to the Bradwood Project (final EIS, p. 3-27), the parties assert that the Commission dismisses the project for not having "clear environmental advantages" over Bradwood. Having viable but unexamined alternatives, the parties contend, makes the EIS inadequate.[91] The parties note that Oregon LNG, an alternative project, is described (final EIS section 3.1.3.4) and rejected based on the project's least desirable pipeline route of 130 miles, rather than considering its shorter, environmentally preferable route of 58 miles. Similarly, the Port Westward LNG project is rejected because of longer LNG vessel transit and uncertainties over the lease agreement for the marine berth parcel, while the Commission ignores numerous other advantages of the site (final EIS, p. 3-40).

154. Oregon states that the Port Area/Waterway Review of alternate LNG terminal sites identifies only Coos Bay as an appropriate area for a terminal, even thought that site would require significantly more dredging than the Bradwood Terminal and the Commission claimed that it would limit its review to sites that required less dredging (final EIS, p. 3-50). Oregon states that the Commission should apply a consistent standard for alternative sites.

155. Oregon asserts that several of the alternatives meet the stated purpose of the Bradwood Project, but are rejected. For example the Kitimat LNG terminal alternative could provide additional gas to the Pacific Northwest but is rejected because the smaller

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[91] *Citing Westlands Water*, 376 F.3d at 868 (quoting *Morongo Band*, 161 F.3d at 575).

amounts of gas it would provide would need to be transported a longer distance to the market center of Portland (final EIS, p. 3-23). This analysis impermissibly narrows the objectives of the project, states Oregon, because the description of the purpose for the Bradwood Project makes no mention of minimum volumes or Portland being the market center.

156. Likewise, Oregon contends the Commission rejects each alternative because it fails to meet the project objective of delivery to the PGE Beaver Power Plant at Port Westward without the construction of a lateral, and then uses the construction of these laterals and their impact to the environment to reject the alternatives. However, Oregon points out that delivery of gas to the PGE Beaver Power Plant is not a purpose stated in the final EIS. Alleging that the Commission conflates the design of its preferred alternative with the purpose and needs it should be addressing, Oregon states that the Commission must issue a supplemental EIS to take a hard look at the alternatives.

Commission Response

157. Section 3 of the final EIS discusses LNG terminals on the West Coast of the United States as well as other proposed pipeline projects in Oregon that may be considered as alternatives to the Bradwood Project. There is scant evidence that any of these alternatives could transport natural gas to the Pacific Northwest at lower cost than the Bradwood Project. The final EIS at section 1.1 references Oregon's contention that new interstate pipelines could bring domestic natural gas to the Pacific Northwest at lower prices than imported LNG. However, as noted in the Commission's September 18 Order, NorthernStar challenged Oregon's findings, and presented data that in some situations imported LNG may cost less than domestically produced natural gas. The Commission's research indicated that at particular times LNG could cost more or less than domestic natural gas, depending on market conditions. However, the final EIS, p. 1-9 recognizes that "if new interstate pipelines are authorized and built, and transport domestically produced natural gas at substantially lower costs than imported LNG, then the market may not support the construction of LNG import terminals in Oregon."

158. We do not agree that the proposed pipeline alternatives could serve the same purpose as the Bradwood Project, or that any of these proposed pipelines would be superior from an economic, social, or environmental perspective. Section 3 of the final EIS sets forth the criteria that were employed for evaluating potentially reasonable and environmentally preferable alternatives to the Bradwood Project. The Commission's alternative evaluation criteria include whether the alternatives are technically feasible and practical; offer significant environmental advantage over the proposed project or its components; and meet project objectives. The Bradwood Project's primary objective is to provide a new supply of natural gas to the Pacific Northwest through the importation of LNG. The courts have upheld federal agencies' use of applicants' identified objectives

as the basis for evaluating alternatives.[92] The purpose of the proposed Ruby, Bronco, and Sunstone pipelines is to bring Rocky Mountain natural gas to northern Nevada and northern California, which is different from the main objectives identified by NorthernStar. In addition, as explained in section 3.1.2.2 of the final EIS, because these other proposed pipelines would be far greater in length than the Bradwood Pipeline, they most likely would have greater environmental impacts.

159. The Commission also considered the No Action Alternative. We decided that it was in the public interest to authorize the Bradwood Project because denying it or postponing a decision would prevent the Pacific Northwest from gaining access to new sources of natural gas in the form of imported LNG to serve future needs. The Commission will not delay making a decision about the Bradwood Project until environmental reviews may be completed for other Oregon proposals. The Commission does not typically choose among potentially competing projects. It has been our practice to evaluate each individual proposal on its own merits. We are willing to authorize more than one project in the same geographic region if each project could be constructed and operated in a safe manner, and if the adverse environmental impacts for each could be mitigated. Ultimately the market will decide which projects it will support, and determine what infrastructure is built to serve that market.

160. Our final EIS at section 3.1.1.3 considered a range of renewable energy resources as potential project alternatives, including hydropower, wind, solar, biomass, and geothermal resources. The EIS concluded that none of these renewable energy resources, independently, could generate an equivalent amount of energy as proposed to be delivered by the Bradwood Project. Much of the projected future capacity of renewable energy in the Pacific Northwest is predicated on getting power to markets via an infrastructure system that does not currently exist. Our final EIS pointed this out with regard to wind power by remarking that electricity generated by wind farms in eastern Washington and Oregon cannot access potential customers in population centers along the coast via existing powerlines. Oregon itself has recognized that demand for natural gas will increase in the future since it will be used as bridge fuel while renewable energy resources are being developed, and to firm up peak capacity when electricity is not readily available from hydropower sources (in the winter) or from wind farms when the wind is not blowing.

161. The Palomar, Ruby, and Bronco Projects are analyzed in final EIS section 3.1.2.2 as alternatives to the Bradwood Project based on existing data at the time the draft EIS was written in July 2007. At that time, the Bronco pipeline was considered a speculative venture that the market did not appear to support, and that very well might not proceed. We note that as of December 2008, Bronco had not submitted a proposal to the

[92] *City of Grapevine, Texas v. DOT*, 17 F.3d 1502, 1506 (D.C. Cir. 1994).

Commission. NEPA only requires the analysis of reasonable alternatives. It is entirely sound for the Commission to conclude that Bronco does not provide a reasonable alternative. As of December 2008, Ruby is still being reviewed under our pre-filing process. Newly-submitted information by Ruby bolsters our finding in the September 18 Order that the longer lengths of these pipelines would result in greater environmental impacts. The draft environmental resource reports filed by Ruby in September 2008, reveal that: the Ruby pipeline would cross 563 waterbodies (while the Bradwood Pipeline would cross 94 waterbodies); there are 41 federally listed threatened or endangered species along the Ruby pipeline route (compared to 19 listed species potentially existing along the Bradwood Pipeline); and 837 archaeological sites were identified along the Ruby pipeline (while only 2 sites were identified along the Bradwood Pipeline).

162. The final EIS, p. 3-1 noted that not all conceivable alternatives are technically and economically feasible or practical, because, for instance, they may be unavailable and/or incapable of being implemented. The final EIS explained that each alternative was considered up until it became clear that the alternative was not reasonable or would result in significantly greater environmental impacts or could not be readily mitigated. Naturally, the alternatives that appeared to be the most reasonable with less than or similar levels of environmental impact were reviewed in the greatest detail.

163. We disagree with Oregon and Riverkeeper that the final EIS did not include accurate or sufficiently detailed information with regard to alternatives. In preparing the 75-page alternatives discussion of the final EIS, we obtained information about other projects directly from filings submitted to the Commission, comments provided by their sponsors, and from government agencies and relevant groups, such as the Northwest Gas Association, the Oregon DOE and the Energy Information Administration. We note further that particular details and comparative analyses were provided for the most pertinent alternatives: the Palomar, Bronco/Sunstone and Ruby pipelines, and the other proposed LNG projects in the region, such as Oregon LNG and Jordan Cove. Moreover, we disagree with the comment that the alternatives analysis only considered broad measures of impact, such as pipeline length. Resource information pertaining to the alternative pipelines and LNG facilities was reviewed as an important means of determining whether one or more of these projects were environmentally preferable. None of the alternative projects met that criterion.

164. Nor do we find on rehearing that the final EIS inappropriately rejects alternatives that may be less expensive, more dependent on renewable resources, or based primarily on conservation. Fundamental to the alternatives analysis presented in section 3 is whether the alternatives identified could be expected to fulfill the project need and objectives. While renewable sources of energy and sound conservation measures are important components of managing energy in the Pacific Northwest, we do not believe that they would eliminate the need for additional natural gas.

M. Environmental Condition No. 1

165. Condition 1 of the Appendix to the September 18 Order grants authority to the Director of the Office of Energy Projects (OEP) to approve modifications to the construction procedures and mitigation measures set forth in Bradwood Landing's applications, filings, the final EIS and the September 18 Order. The Commission delegates authority to the Director of OEP pursuant to 18 C.F.R. § 375.308. In particular, the Director may "[t]ake whatever steps are necessary to ensure the protection of all environmental resources during the construction or operation of natural gas facilities, including authority to design and implement additional or alternative measures and stop work authority."[93] Oregon and Riverkeeper argue that this regulation does not allow the Director to modify the Commission's orders. Similarly, they question the Commission's delegation to the Director of OEP of authority to approve final construction. The parties contend that delegating such authority to one individual denies the public from involvement before binding and final decisions are made by OEP and that without some limiting standards there is potential to evade the NEPA review of impacts of the change.

Commission Response

166. We disagree with Oregon and Riverkeeper. The cited delegation of authority gives the Director of OEP authority to protect the environment by implementing additional or alternative measures which by their very nature would modify previous measures adopted by the Commission. In any event, the September 18 Order clearly provides the Director the authority to modify a condition imposed in the order.[94] The matters delegated to the Director of OEP are matters within the particular technical expertise of the Director and his staff. To the extent the Director adds or modifies a requirement in response to information filed in the proceeding, such information will have been available in e-Library for review and comment by interested parties. Moreover, any delegated order issued by the Director significantly modifying the Commission's order would be subject to rehearing and the Commission's order subject to judicial review. Thus, the due process rights of all parties would be protected.

N. Enforceability and Clarity of Conditions

167. Oregon submits that the September 18 Order's many conditions allowing Commission staff to make the final determination regarding compliance with the order do

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[93] 18 C.F.R. § 375.308 (x)(7) (2008).

[94] The Commission is permitted to establish its policies by rulemaking or by adjudication. *See, e.g., SEC v. Chenery Corp*., 332 U.S. 194, 201-203 (1947); *NLRB v. Bell Aerospace*, 416 U.S. 267, 294 (1974).

not contain standards to govern when the goal of any condition has been met. Oregon states that a fundamental principle of delegation is that the delegation must be accompanied by standards to govern the actions of the delegatee.[95] For example, Condition 3 authorizes any additional measures deemed necessary to assure continued compliance with the "intent of environmental conditions." Oregon states such vague and discretionary standards do not provide agencies, the public, the applicant or Commission staff with meaningful guidance or certainty.

168. Further, Oregon requests the Commission to clarify the term "construction" as it is used in the order and conditions. It notes that many of the conditions that have been delegated to the Director of OEP for determination are required to be completed "before beginning" or "prior to" construction of the project. However, Oregon states that the term is neither defined nor used consistently. Oregon further questions the timing requirements of conditions related to construction of the pipeline and LNG import terminal. Oregon presumes from the prefaces to conditions 57 through 70 and 71 through 104 that initial site preparation can begin before the Director of OEP approves the beginning of construction. If so, Oregon submits that there could be substantial economic environmental impacts for a facility that has not been fully authorized. Oregon asks what the differences are, if any, between "before construction" (condition 4), "before the start of construction"(condition 5), "prior to construction" (conditions 13, 16), and "prior to pipeline construction" (condition 14). It asks whether NorthernStar can conduct dredging activities before receiving authorization to begin construction (condition 21) and also asks if fish collection (condition 31), demolition (condition 23), site preparation (condition 34) or clearing (condition 41) can begin before receiving OEP's authorization to begin construction.

169. Oregon also states that the order does not address whether staff will enforce voluntarily undertaken mitigation such as the salmon enhancement initiative (SEI). It states there is little guidance as to the contents of the emergency response plans or compliance with Oregon's carbon dioxide standards, which NorthernStar has voluntarily agreed to adopt.

170. Additional concerns expressed by Oregon relate to the specificity of the proposed CZMA condition 45 which Oregon states should make clear that construction of any project component requiring Commission or COE authorization will not begin until the state CZMA concurrence is provided. Oregon requests assurance that county conditions, DEQ conditions, DSL conditions, ODFW conditions, WRD conditions and any other conditions that are ultimately included in the state's CZMA decision will be monitored by the Commission to ensure compliance.

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[95] *Citing Mistretta v. U.S.*, 488 U.S. 361 (1989).

171. Oregon requests that the order's fish screening requirements (condition 34) be clarified to assure that the use and monitoring of fish screening will protect threatened and endangered species. As written, the condition only requires that a fish screening plan be developed.

172. Oregon understands that the currently-proposed Submerged Combustion Vaporization (SCV) system does not require an open loop system or additional river water for cooling. However, Oregon requests assurance that any future modifications approved by OEP will not increase the potential for adverse environmental impacts.

Commission Response

173. We believe that, viewed as a whole, the conditions of the September 18 Order adopt a comprehensive plan to ensure NorthernStar's compliance with the requirements of the Commission's order not only during construction of the project but for the life of the proposed facilities. While the primary responsibility for ensuring compliance with the Commission's order lies with NorthernStar, we will make certain that NorthernStar is fulfilling its duties by conducting our own compliance monitoring during construction, including regular field inspections. In addition, the Commission and the Coast Guard will continue compliance inspections of the terminal throughout the life of the project. If NorthernStar fails to comply with the conditions of the order, it is subject to sanctions and an assessment of civil penalties of up to $1 million per day per violation for violations of our order.[96]

174. We clarify that there is no difference in the intent of conditions that are worded "prior to initial site preparation," "prior to construction," or "before construction." These are equivalent terms meaning that no construction-related activities, including clearing and grading work and dredging, can occur until after a written approval is received by the applicants from the Commission in the form of a "Notice to Proceed" for the particular action in question.

175. The Commission's condition 34 clearly requires CZMA consistency prior to construction of pipeline or terminal facilities. Construction of any project facilities requires the Commission's approval. Construction of facilities affecting resources under the jurisdiction of the COE requires both COE and Commission authorization. The project must be consistent with the enforceable policies of the coastal management program before either the COE or the Commission allows construction of project

[96] EPAct 2005 amended the NGA to give the Commission the authority to assess civil penalties of up to $1 million per day per violation for violations of rules, regulations, and orders issued under the act. Energy Policy Act of 2005, Pub. L. No. 109-58, 314(b)(1)(B), 119 Stat. 594, 691 (2005).

facilities. The enforceable policies that are included in Oregon's federally approved coastal management program are existing laws and regulations that are "enforceable". Monitoring, determination of compliance, and enforcement of these policies is the primary responsibility of the parent agency.

176. Voluntarily undertaken mitigation measures (e.g., the SEI and State of Oregon's carbon dioxide standards) are enforceable under condition 1 of the September 18 Order, which requires NorthernStar to follow the construction procedures and mitigation measures described in its applications, supplemental filings, and as identified in the final EIS, unless modified by the Commission's order.

177. The screening of water intakes are discussed above. As stated there, the Commission intends that all water taken from the Columbia River for the Bradwood Project be screened to prevent the entrainment of juvenile fish. Likewise, we discuss NorthernStar's proposed vaporization system above. NorthernStar has proposed SCVs to regasify LNG, not an open-rack system. Therefore, the final EIS at section 4.3.2.3 analyzed the impacts resulting from the construction and operation of SCVs and the September 18 Order only authorizes the use of SCVs.

O. Public Interest Finding

178. Oregon, Riverkeeper and the Tribes contend that the Commission's finding that the Bradwood Project in the public interest is flawed. Oregon states that the Commission's Certificate Policy Statement applies to the construction of pipelines, not to LNG terminals. However, it notes that after making a public interest finding for the Bradwood Pipeline in the discussion of the Policy Statement, the order goes on to state that the same rationale is applicable to proposals to site and construct LNG terminals under section 3 of the NGA.[97] Oregon submits that the public interest findings under NGA sections 3 and 7 are distinct and that the Commission erroneously applied the Certificate Policy Statement's balancing test to the Bradwood Terminal.

179. That error aside, the parties contend that it would be impossible for the Commission to make a public interest finding for either the terminal or the pipeline because of lack of information available to use in any balancing of public benefits and adverse impacts or to assess whether the proposal is appropriate or necessary.

Commission Response

180. To the extent the September 18 Order was unclear on this point we clarify that, although the Certificate Policy Statement is applicable only to determining the public

[97] *Bradwood*, 124 FERC ¶ 61,257, at P 18.

convenience and necessity under NGA section 7 for pipeline projects, the Policy Statement's underlying principle that a project is in the public interest if its benefits outweigh any potential adverse impacts is applicable in our determination of the public interest for LNG projects under NGA section 3. As we noted in the September 18 Order, the Bradwood Project provides a number of benefits: it will provide up to 1.3 Bcf per day of additional natural gas to the Pacific Northwest, introducing a new source of natural gas, imported LNG, to the region, thereby diversifying available sources of energy and increasing the overall supply of natural gas available to meet estimated future demand in the region and will provide an additional source of natural gas to be transported downstream of the Bradwood Pipeline. Further, since section 3 grants no right of eminent domain, all property rights for the terminal will be acquired from willing sellers. Moreover, as a new entity, there is no issue of subsidization by existing customers. Finally, we weighed the benefits against residual adverse environmental impacts and found that if the project is constructed and operated in accordance with the environmental mitigation and other conditions imposed in the September 18 Order, the proposed Bradwood Terminal will not be inconsistent with the public interest, satisfying the standard in section 3 of the NGA. We stand by that finding.

181. We disagree that there is a lack of information in the record that renders invalid our finding that the project is in the public interest. The parties refer to reports and plans that NorthernStar is required to file after the issuance of the final EIS. As discussed above, we reiterate our finding in the September 18 Order that the final EIS meets the requirements of NEPA and that no supplemental EIS is required to analyze post-final EIS filings. Accordingly, we find that there is sufficient information in the record to use in balancing public benefits and adverse impacts in determining that the project is in the public interest.

The Commission orders:

(A) The requests for rehearing are denied for the reasons given in the text of this order.

(B) The untimely motions to intervene filed by CTUIR and Energy Action NW are denied and CTUIR's request for rehearing is dismissed.

(C) NorthernStar's request for to hold the rehearing in abeyance is denied.

By the Commission. Commissioner Wellinghoff dissenting with a separate statement attached.

(S E A L)

Kimberly D. Bose,
Secretary.

UNITED STATES OF AMERIC
FEDERAL ENERGY REGULATORY COMMISSION

Bradwood Landing LLC	Docket No. CP06-365-002
NorthernStar Energy LLC	Docket Nos. CP06-366-002 CP06-376-002 CP06-377-002

(Issued January 15, 2009)

WELLINGHOFF, Commissioner, dissenting:

I dissented from the September 18 Order, explaining in detail why I concluded that the Bradwood Project is not in the public interest. I continue to have serious concerns about this project. For this reason, I dissent from today's order.

_____
Jon Wellinghoff
Commissioner