151 FERC ¶ 61,012
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Chairman;
Philip D. Moeller, Tony Clark,
Norman C. Bay, and Colette D. Honorable.

Sabine Pass Liquefaction Expansion, LLC Docket Nos. CP13-552-000
Sabine Pass Liquefaction, LLC
Sabine Pass LNG, L.P.

Cheniere Creole Trail Pipeline, L.P. CP13-553-000

ORDER GRANTING AUTHORIZATION UNDER SECTION 3 OF THE NATURAL GAS ACT AND ISSUING CERTIFICATE

(Issued April 6, 2015)

1. On September 30, 2013, Sabine Pass Liquefaction Expansion, LLC, Sabine Pass Liquefaction, LLC, and Sabine Pass LNG, L.P. (collectively, Sabine Pass) and Cheniere Creole Trail Pipeline, L.P. (Creole Trail) filed a joint application in Docket Nos. CP13-552-000 and CP13-553-000, respectively. In the application, Sabine Pass seeks authorization under section 3 of the Natural Gas Act (NGA)[1] to site, construct, and operate certain additional facilities for the liquefaction and export of domestically-produced natural gas (Liquefaction Expansion Project). Creole Trail seeks authorization under section 7(c) of the NGA[2] and Parts 157 and 284 of the Commission regulations[3] for a certificate of public convenience and necessity authorizing it to construct and operate interstate natural gas pipeline, compression, and related facilities in Louisiana to deliver additional domestic natural gas supplies to Sabine Pass's LNG terminal (Creole Trail Expansion Project).

[1] 15 U.S.C. § 717b (2012).

[2] 15 U.S.C. § 717f (2012).

[3] 18 C.F.R. pts. 157 and 284 (2014).

2. As discussed in this order, the requested authorizations under NGA sections 3 and 7 are granted.

I. Sabine Pass's Liquefaction Expansion Project

A. Background

3. In 2004, the Commission authorized Sabine Pass under section 3 of the NGA to site, construct, and operate a liquefied natural gas (LNG) terminal in Cameron Parish, Louisiana, to import, store, and vaporize foreign-source LNG.[4] Subsequently, in 2009, the Commission amended Sabine Pass's NGA section 3 authorization to allow the terminal facilities to export LNG that had been previously imported into the United States and stored at the Sabine Pass terminal in liquid form.[5]

4. In 2012, the Commission authorized Sabine Pass under NGA section 3 to site, construct, and operate facilities to liquefy domestic natural gas, store the LNG in the terminal's storage facilities, and deliver the LNG from the storage tanks into marine vessels for export (Liquefaction Project). Specifically, the 2012 Order authorized Sabine Pass to construct and operate four LNG process trains in two stages (Trains 1 and 2 in Stage 1 and Trains 3 and 4 in Stage 2) with a total LNG production capacity of 16 million tons per year (mtpa), or 2.2 Bcf per day (approximately 4 mtpa per train).[6]

5. In 2013, the Commission authorized Sabine Pass, among other things, to accelerate construction of Stage 2 (Trains 3 and 4) to coincide with construction of Stage 1 (Trains 1 and 2).[7] Subsequently, in 2014, the Commission also approved Sabine Pass's request to increase the Liquefaction Project's authorized production capacity from approximately 16 mtpa, or 2.2 Bcf per day, to approximately 20 mtpa, or 2.76 Bcf per day.[8]

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[4] *Sabine Pass LNG, L.P.*, 109 FERC ¶ 61,324 (2004) (2004 Order).

[5] *Sabine Pass LNG, L.P.*, 127 FERC ¶ 61,200 (2009).

[6] *Sabine Pass Liquefaction, LLC*, 139 FERC ¶ 61,039, *reh'g denied*, 140 FERC ¶ 61,076 (2012) (2012 Order).

[7] *Sabine Pass Liquefaction, LLC*, 144 FERC ¶ 61,099 (2013). Sabine Pass plans to place Trains 1 and 2 into service in the second quarter 2015 and Trains 3 and 4 into service in early 2016.

[8] *Sabine Pass Liquefaction, LLC*, 146 FERC ¶ 61,117, *reh'g denied*, 148 FERC ¶ 61,200 (2014).

B. Proposals

6. In this application Sabine Pass proposes to site, construct, and operate the following facilities:

- LNG Trains 5 and 6, each capable of a peak annual production of 251.5 Bcf of LNG, with appurtenant facilities including gas treatment facilities to remove and dispose of solids, carbon dioxide, sulfur, heavy hydrocarbons, water and mercury; waste heat recovery systems; gas-fired compression for liquefaction and power generation; fire and gas detection and safety systems; control systems and electrical infrastructure;
- New utilities and support infrastructure, including impoundments for the liquefaction trains;
- Modifications to the existing LNG terminal facilities; and
- New buildings for remote input/output, operator shelter and substations, compressor and analyzer shelters, and water demineralizer treatment.

7. The proposed construction of Trains 5 and 6 in Stage 3 would increase the Liquefaction Project's total authorized production capacity from approximately 20 mtpa, or 2.76 Bcf per day, to approximately 29 mtpa, or 4.14 Bcf per day. Sabine Pass states that it has executed sales and purchase agreements with Total Gas & Power North America, Inc. and Centrica PLC to deliver 101 Bcf and 88.3 Bcf per year of LNG, respectively. Sabine Pass states that this represents most of the anticipated LNG production from proposed Train 5. Sabine Pass states that it is negotiating for the sale of LNG from proposed Train 6.

8. Sabine Pass asserts that the Commission and the Department of Energy's Office of Fossil Energy (DOE/FE)[9] have already made multiple findings that the Liquefaction Project, approved in 2012 and subsequently amended, is not inconsistent with the public interest. Sabine Pass contends that its proposals promote stability in domestic natural gas pricing, promote liberalization of global natural gas trade, advance national security and the security of our allies, and increase economic trade and ties with foreign nations.

9. The Liquefaction Expansion Project will be located entirely within the existing Sabine Pass terminal boundaries. Sabine Pass states that it does not need to construct additional storage tanks. Sabine Pass states that the proposals will not result in additional

[9] DOE/FE Order No. 2961 at 29-42 (2011) and Order No. 2833 (2010).

ship traffic beyond the previously-evaluated maximum annual level of 400 total ship visits per year.

II. Creole Trail's Expansion Project

A. Background

10. In addition to authorizing Sabine Pass to site, construct, and operate its LNG terminal, the 2004 Order also authorized Creole Trail to construct and operate a pipeline to deliver regasified LNG northward from Sabine Pass's LNG terminal.[10] Cheniere LNG Marketing, Inc. (Cheniere Marketing) subscribed to all of the northbound capacity for 20 years at maximum Part 284 rates under Rate Schedule FTS.[11]

11. Creole Trail's existing system consists of approximately 94.8 miles of 42-inch-diameter pipeline, originating at Creole Trail's interconnection with Sabine Pass's LNG terminal and extending to its terminus at an interconnection with Texas Eastern Transmission, LP in Beauregard Parish near Gillis, Louisiana.[12] In 2013, the Commission authorized Creole Trail to modify its existing facilities to enable it to transport domestic gas southward to Sabine Pass's LNG terminal for liquefaction and export.[13] Sabine Pass subscribed to all of the southbound capacity at negotiated rates.

B. Proposals

12. All of Creole Trail's existing facilities are located in its rate Zone 1, which extends from the Sabine Pass LNG Terminal to the Gillis Compressor Station header, located near Gillis, Louisiana. Creole Trail proposes to construct and operate expansion facilities in Zone 1 and in a newly proposed rate Zone 2, which will extend from the

[10] Originally, the Commission authorized Cheniere Sabine Pass Pipeline, L.P. to construct and operate the pipeline. In 2007, Cheniere Sabine Pass Pipeline, L.P. merged into, and became known as, Cheniere Creole Trail Pipeline, L.P. *Cheniere Creole Trail Pipeline, L.P.*, 121 FERC ¶ 61,071 (2007).

[11] Cheniere Marketing was formerly known as Cheniere Resources Inc.

[12] Creole Trail also has interconnections with Natural Gas Pipeline Company of America, Transcontinental Gas Pipe Line Company, LLC, Tennessee Gas Pipeline Company, Florida Gas Transmission Company, Trunkline Gas Company, and Bridgeline Holdings, LP.

[13] *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013), *reh'g denied*, 145 FERC ¶ 61,074 (2013).

Gillis Compressor Station to the receipt points at the end of four laterals extending from the proposed Mamou Compressor Station near Mamou, Evangeline Parish, Louisiana, to interconnections with Columbia Gulf Transmission Company (Columbia Gulf), Pine Prairie Energy Center (Pine Prairie), ANR Pipeline Company (ANR), and Texas Gas Transmission, LLC (Texas Gas).

13. Specifically, in Zone 1, Creole Trail proposes to construct and operate:

- a 13.9-mile-long, 42-inch-diameter pipeline from the LNG Terminal to associated valves in Zone 1 (Loop 1), including installation of bi-directional capability at the existing Johnson Bayou delivery meter**;** and
- a 24.5-mile-long, 42-inch-diameter pipeline from the existing Creole Trail mainline valve 5 to the Gillis Compressor Station (Loop 2).[14]

14. In Zone 2, Creole Trail proposes to construct and operate:

- a 48.5-mile-long, 42-inch-diameter extension from the Gillis Compressor Station to the newly proposed Mamou Compressor Station in Evangeline Parish;
- the Mamou Compressor Station, with 53,000 horsepower of natural gas-fired compression, at the eastern end of the extension in Zone 2;[15]

[14] Both loops will deliver domestic natural gas southward to Trains 5 and 6.

[15] Upon completion of the Creole Trail Expansion Project, the proposed Mamou Compressor Station will have more than 15,000 horsepower (HP). Creole Trail states that it has reviewed the guidelines of waste heat recovery as discussed in the Interstate Natural Gas Association of America White Paper entitled "*Waste Energy Opportunities for Interstate Natural Gas Pipelines*" (February 2008). Creole Trail states that it has not undertaken a feasibility analysis for installing waste heat power generation facilities at the Mamou Compressor Station. Creole Trail asserts that, since the Mamou Compressor Station is a greenfield facility, there is no operating experience, and estimates are uncertain as to whether the station would meet the requisite 60 per cent load factor identified in the White Paper. Creole Trail asserts that it is not economically viable to install waste heat facilities at this station at this time. Accordingly, Creole Trail shall monitor this station and evaluate the potential for adding waste heat generation to the facilities and post this information to its electronic bulletin board.

- three, 36-inch-diameter laterals and one 42-inch-diameter lateral from the end of the extension at the Mamou Compressor Station to points of interconnection with four connecting suppliers, i.e., Columbia Gulf, Pine Prairie, ANR, and Texas Gas; and

- Four new meter and regulating stations to receive gas from Columbia Gulf, Pine Prairie, ANR, and Texas Gas.[16]

15. Creole Trail's existing system is currently being modified to provide up to 1.53 Bcf/d of firm reverse flow transportation service for the delivery of domestic feed gas to Sabine Pass's LNG Trains 1-4.[17] The looping facilities in Zone 1 proposed here will enable the transportation of an additional 1.5 Bcf/d, for a total of 3 Bcf/d of firm reverse flow capability in Zone 1. Creole Trail projects that in addition to the primary objective of accessing increased sources of feed gas for the Liquefaction Project, its proposed Zone 2 facilities will enable it to provide up to 2 Bcf/d of transportation service to potential future customers seeking to transport natural gas between Zones 1 and 2, as well as within Zone 2.

16. Creole Trail conducted an open season from November 25 through December 9, 2013, for its pipeline expansion proposal. Sabine Pass and another party responded to the open season invitation, but neither party executed a precedent agreement for the facilities proposed in Zones 1 and 2.

17. Creole Trail estimates that the capital cost of constructing the Creole Trail Expansion Project will be approximately $610.5 million, with $207.4 million for the proposed facilities in Zone 1 and $403 million for the proposed facilities in Zone 2.[18] Creole Trail anticipates financing the project with 70 percent debt and 30 percent equity. Creole Trail's proposed rates reflect a return on equity of 14 percent, and an effective interest rate on debt of 7.75 percent retired over 15 years.

18. For firm service utilizing the proposed Zone 1 facilities, Creole Trail proposes to charge as initial rates the currently-effective Part 284 Zone 1 maximum recourse charge

[16] Creole Trail will also construct and operate 16 mainline valves with the proposed pipeline facilities. Five will be located in Zone 1 and eleven in Zone 2.

[17] *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013), *reh'g denied*, 145 FERC ¶ 61,074 (2013) (Bi-directional project includes the new Gillis Compressor Station).

[18] Creole Trail Application Exhibit K at 6 and Exhibit Z at 2.

of $4.447 per Dth per month under Rate Schedule FTS.[19] Creole Trail proposes to charge the currently-effective Rate Schedule ITS charge of $0.1462 per Dth for interruptible transportation service, which is the100 percent load factor derivative of the Rate Schedule FTS rates. Creole Trail requests a predetermination that it may roll the costs associated with the proposed Zone 1 facilities into its system rates in a future NGA section 4 rate proceeding.

19. Creole Trail is proposing incremental initial recourse rates for transporting natural gas through the Zone 2 facilities. Creole Trail proposes a Zone 2 reservation charge of $3.0464 per Dth per month under Rate Schedule FTS, an authorized overrun charge of $0.1002 per Dth, and an interruptible charge of $0.1002 per Dth under Rate Schedule ITS.[20]

20. Creole Trail proposes to charge a fuel retainage percentage for transportation in Zone 1 of 0.37 percent, in effect on the date of filing the application, which Creole Trail states it will true-up in accordance with section 6.15 of the General Terms and Conditions.[21] Creole Trail proposes an incremental fuel retainage percentage of 0.70 percent for Zone 2.

III. Public Notice

21. Notice of the application was published in the *Federal Register* on October 18, 2013, with interventions and protests due October 31, 2013. Total Gas & Power North America, Inc. (Total Gas), Chevron USA, Inc., Centrica PLC, and Sierra Club filed timely, unopposed motions to intervene.[22]

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[19] Cheniere Creole Trail Pipeline, L.P., FERC NGA Gas Tariff, Baseline Tariff, Section 4, Statement of Currently Effective Rates, 13.0.0. *Cheniere Creole Trail Pipeline, L.P.*, 122 FERC ¶ 61,301 (2008) (approving revised initial transportation rates to reflect increased cost of service).

[20] Exhibit N at 11.

[21] The retainage percentage includes fuel, lost and unaccounted-for gas, and any imbalances due to meter equipment tolerances.

[22] Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214 (2014). On January 12, 2015, Sierra Club filed comments on the Environmental Assessment (EA) that incorporated by reference and supplemented its motion to intervene.

22. Chevron's and Sierra Club's motions to intervene included protests. On November 12 and November 15, 2013, Sabine Pass filed answers to Chevron's and Sierra Club's protest, respectively. Chevron and Sierra Club filed answers to Sabine Pass's answer. Although the Commission's Rules of Practice and Procedure do not permit answers to protests or answers to answers, the Commission finds good cause to waive its rules and accept these pleadings because they provide information that has assisted in our decision making.[23] Sierra Club's arguments will be addressed in the environmental section of this order.

IV. Discussion

A. Sabine Pass's Liquefaction Expansion Project

23. Because the proposed facilities will be used to export natural gas to foreign countries, the siting, construction and operation of the facilities require Commission approval under NGA section 3.[24] While NGA section 3(a) provides that an application shall be approved unless the proposal "will not be consistent with the public interest," NGA section 3 also provides that an application may be approved "in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate."[25] NGA section 3(a) also provides that for good cause shown, the Commission may make supplemental orders as it may find "necessary or appropriate."

[23] 18 C.F.R. § 385.213(a)(2) (2014).

[24] 18 C.F.R. § 153.5 (2014). The regulatory functions of section 3 of the NGA were transferred to the Secretary of Energy in 1977 pursuant to section 301(b) of the Department of Energy Organization Act. 42 U.S.C. § 7151(b) (2006). Pursuant to sections 643 and 402(e) of the Act, 42 U.S.C. §§ 7252 and 7172(e), the Secretary of Energy subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of particular facilities, the site at which facilities shall be located, and with respect to natural gas that involves the construction of new domestic facilities, the place of entry for imports or exit for exports. The most recent delegation is in DOE Delegation Order No. 00-044.00A, effective May 16, 2006. The Commission does not authorize importation or exportation of the commodity natural gas.

[25] For a discussion of the Commission's authority to condition its approvals of LNG facilities under section 3 of the NGA, *see, e.g., Distrigas Corporation v. FPC*, 495 F.2d 1057, 1063-64 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974) and *Dynegy LNG Production Terminal, L.P.*, 97 FERC ¶ 61,231 (2001).

24. Chevron contends that since the Liquefaction Expansion Project does not include additional berthing capacity, the project may negatively impact Chevron's existing contractual rights to berthing capacity for imports under its Terminal Use Agreement. Sabine Pass responds that Total Gas, also an import customer, will relinquish substantially all of its import berthing capacity when Train 5 begins commercial operations and that this relinquished berthing capacity will support the operations of the Liquefaction Expansion Project.

25. The 2012 Order approving the Liquefaction Project rejected a similar argument by Chevron.[26] The 2012 Order stated that there was no physical limitation to simultaneous operation of the existing regasification and proposed liquefaction capabilities and that that there was no reason to believe that the rights of existing terminal customers would be jeopardized by construction and operation of the Liquefaction Project. The order added that if disputes should arise, those matters should be resolved under the terms of a customer's Terminal Use Agreement. The same response is appropriate here to deal with possible future disagreements over berthing rights. However, an infringement of Chevron's contractual berthing rights appears remote because Chevron's own comments state that under recent market conditions, its import capacity at the LNG terminal has been unused for the majority of the time.[27]

26. Sierra Club contends the project is contrary to the public interest because it will increase domestic gas and electricity prices, transfer wealth from American workers to the energy industry, and increase coal use for power generation. Sierra Club asserts that the project's adverse environmental and economic impacts outweigh the economic benefits of additional gas production and employment.

27. In determining whether construction and operation of the Liquefaction Expansion Project is consistent with the public interest under section 3(a) of the NGA, we decline to address Sierra Club's economic claims, as they concern impacts associated with the exportation of the commodity natural gas, which, by law, the Department of Energy (DOE), not the Commission, is authorized to analyze.[28] Section 3(a) of the NGA

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[26] 2012 Order, 139 FERC ¶ 61,039 at P 24.

[27] Chevron's October 31, 2013 Comments at 3-4. DOE public information indicates that Chevron did not import any LNG into Sabine Pass's terminal in 2013 and none through April 2014. http://energy.gov/fe/downloads/lng-annual-report-2013; http://energy.gov/sites/prod/files/2014/06/f16/Apr14LNG.pdf.

[28] Sierra Club has raised its economic harm arguments before DOE in connection with the pending application for authority to export LNG from the project to non-Free Trade Agreement nations. *See* Sierra Club's Motion to Intervene, Protest, and

(continued…)

provides, in part, that "no person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the Commission authorizing it to do so."[29] In 1977, the Department of Energy Organization Act transferred the regulatory functions of section 3 of the NGA to the Secretary of Energy.[30] Subsequently, the Secretary of Energy delegated to the Commission authority to "[a]pprove or disapprove the construction and operation of particular facilities, the site at which such facilities shall be located, and with respect to natural gas that involves the construction of new domestic facilities, the place of entry for imports or exit for exports."[31] The Secretary of Energy, however, has not delegated to the Commission any authority to approve or disapprove the import or export of the commodity itself, or to consider the types of issues raised by Sierra Club as part of the Commission's public interest determination under NGA section 3(a).[32] Thus, the issue of whether the export of LNG will cause economic harm or affect coal consumption is beyond the Commission's purview.

28. In authorizing exports to non-Free Trade Agreement countries, Sierra Club notes that the Secretary of Energy stated that the Office of Fossil Energy within DOE would continue to monitor the impact of exports on domestic gas supplies.[33] Sierra Club contends that the Commission must also monitor the effects of the Liquefaction Project on the economy, gas and electricity prices, and the environment to determine if further Commission actions are warranted, i.e., further study, reduction in export volumes, or revocation of the Commission's approval. As noted, the Commission has no jurisdiction over the economic aspects related to the export of the commodity natural gas. The Commission is imposing environmental conditions to this order which will apply during

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Comments, filed September 23, 2013 in DOE/FE Docket Nos. 13-30-LNG and 13-42-LNG at 61-63.

[29] 15 U.S.C. § 717b(a) (2012).

[30] *See* 42 U.S.C. § 7151(b) (2012).

[31] DOE Delegation Order No. 00-004.00A (effective May 16, 2006).

[32] *See supra,* note 25. *See also National Steel Corp.,* 45 FERC ¶ 61,100, at 61,332-33 (1988) (observing that DOE, "pursuant to its exclusive jurisdiction, has approved the importation with respect to every aspect of it except the point of importation" and that the "Commission's authority in this matter is limited to consideration of the place of importation, which necessarily includes the technical and environmental aspects of any related facilities").

[33] *See DOE/FE* Order No. 2961 at 32-33.

the construction and operation of the Liquefaction Expansion Project. Under section 3(a) of the NGA, the Commission may issue supplemental orders as "necessary or appropriate" to address matters dealing with facilities and their siting within the Commission's jurisdiction.

29. Before the Commission issued its initial order in 2012 granting NGA section 3 authorization for the Liquefaction Project, Sabine Pass received authorization from DOE to export up to 16 mtpa, or 2.2 Bcf per day, of domestically produced LNG by vessel to all Free Trade Agreement and non-Free Trade Agreement nations on September 7, 2010, and May 20, 2011, respectively.[34] Following Sabine Pass's subsequent applications, DOE in 2013 granted Sabine Pass two additional long-term export authorizations to Free Trade Agreement Countries pursuant to contracts with Total Gas & Power North America, Inc. and Centrica.[35] On September 10, 2013, Sabine Pass filed an application with DOE to export to Free Trade Agreement nations surplus LNG produced from Trains 5 and 6 from domestic sources equivalent to 314 Bcf per year for 20 years. On January 22, 2014, DOE granted that authorization.[36] On July 11, 2014, Sabine Pass filed an application with DOE to export LNG equivalent to 0.56 Bcf per day in addition to the volumes authorized for Trains 1-4 to Free Trade Agreement countries. On February 12, 2015, DOE granted the requested authorization.[37]

30. The Liquefaction Expansion Project will be located entirely within the footprint of the previously-approved and currently-operating Sabine Pass terminal site. It does not require additional storage facilities or land acquisition and will have relatively small and well-defined environmental impacts. The Commission concludes that, with the conditions we require, the Liquefaction Expansion Project would result in minimal environmental impacts and can be constructed and operated safely. Accordingly, we find that, subject to the conditions imposed in this order, Sabine Pass's Liquefaction Expansion Project is not inconsistent with the public interest.

B. Creole Trail Expansion Project

31. Since Creole Trail's Expansion Project will be used to transport natural gas in interstate commerce subject to the jurisdiction of the Commission, the construction and operation of the facilities are subject to the requirements of subsections (c) and (e) of

[34] *DOE/FE* Order Nos. 2833 (2010) and 2961 (2011).

[35] *DOE/FE* Order Nos. 3306 and 3307, respectively.

[36] *DOE/FE* Order No. 3384.

[37] *DOE/FE* Order No. 3595.

section 7 of the NGA.[38] Under section 7(c), before an applicant can construct an interstate facility for the transportation of natural gas, it must obtain a "certificate of public convenience and necessity" from the Commission.[39] Section 7(e) provides that such a certificate "shall be issued to any qualified applicant" upon a finding that "the applicant is able and willing properly to do the acts and perform the service proposed . . . and that the proposed service" and "construction . . . is or will be required by the present or future public convenience and necessity."[40]

1. Certificate Policy Statement

32. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new construction.[41] The Certificate Policy Statement establishes criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

33. Under this policy, the threshold requirement for existing pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from the existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of a new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the public benefits outweigh the

[38] 15 U.S.C. §§ 717f(c) and 717f(e) (2012).

[39] 15 U.S.C. § 717f(c).

[40] *Id.* § 717f(e).

[41] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

adverse effects on economic interests will the Commission then proceed to complete the environmental analysis where other interests are considered.

34. The threshold requirement under the Certificate Policy Statement is that Creole Trail must be prepared to financially support the project without relying on subsidization from its existing customers. Generally, this requires that a pipeline charge its existing Part 284 rates as initial rates for an expansion project if those rates are higher than what incremental rates for the project would be.[42] That is the case in this proceeding with respect to Zone 1. Existing customers are further protected by the Commission's decision below not to grant Creole Trail a predetermination that costs associated with the expansion project may be rolled into its Zone 1 system rates.[43]

35. Zone 2 is a newly established rate zone in this proceeding, and there are no existing Zone 2 customers. Since Creole Trail proposes an incremental initial rate under Rate Schedule FTS for service utilizing the Zone 2 facilities under Rate Schedule FTS, the new construction will not be subsidized by existing customers.[44] The Commission finds that the Creole Trail Expansion Project in Zones 1 and 2 meets the threshold no-subsidy requirement of the Certificate Policy Statement.

36. Creole Trail's proposal also meets the remaining criteria set forth in the Certificate Policy Statement. Cheniere Marketing, Creole Trail's existing northbound customer in Zone 1, will not experience any degradation in service, as the proposals will not interfere with Cheniere Marketing's service. In addition, no pipelines or their captive customers filed adverse comments regarding the Creole Trail Expansion Project. Thus, the Commission finds that Creole Trail's proposed project will not affect its existing customers or other pipelines and their customers. Approximately 78 percent of the project's looping, lateral, and extension lines will be co-located or installed adjacent to existing road and pipeline rights-of-way, minimizing the project's impacts on landowners and surrounding communities. With limited exceptions, the applicants primarily will use previously authorized extra workspaces and access roads for construction. Thus, the Commission finds that Creole Trail's efforts to route a significant portion of the pipeline

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[42] *Columbia Gas Transmission, LLC*, 146 FERC ¶ 61,075, at P 26 (2014).

[43] Cheniere Marketing, Creole Trail's only customer on its northbound take-away pipeline, pays maximum Part 284 rates. To date, Creole Trail has not executed a precedent agreement with a shipper to use the Creole Trail Expansion Project facilities in Zone 1 or Zone 2 authorized by this order.

[44] *Transcontinental Gas Pipe Line Co., LLC*, 145 FERC ¶ 61,152, at P 16 (2013) and *Colorado Interstate Gas Co.*, 131 FERC ¶ 61,086, at PP 25, 32-33 (2010).

along existing rights-of-way have minimized the impacts of the project on landowners and surrounding communities.

37. Creole Trail's proposal will enable it to transport increased quantities of domestically-sourced gas to Sabine Pass's LNG terminal where the gas will be liquefied for export. Based on the benefits the proposed project will provide and the potential minimal adverse effect on existing customers, other pipelines and their captive customers, and landowners[45] and surrounding communities, the Commission finds, consistent with the Certificate Policy Statement and subject to the environmental discussion below, that the public convenience and necessity requires approval of the Creole Trail Expansion Project, as conditioned in this order.

2. Rates

a. Zone 1

i. Initial Rates

38. Creole Trail proposes to use its current generally-applicable Part 284 Zone 1 recourse rates as the initial recourse rates for firm and interruptible transportation services using the capacity that will be created by the Creole Trail Expansion Project in Zone 1. Creole Trail calculates that an illustrative incremental Zone 1 reservation charge for the project facilities would be $2.1145 per Dth per month, and the interruptible rate would be $0.0695 per Dth.[46] The existing Zone 1 firm rate of $4.4477 per Dth per month exceeds the Zone 1 incremental rate of $2.1145 per Dth per month. Therefore, we find that Creole Trail's proposed initial firm and interruptible rates for Zone 1 are reasonable and are accepted as the maximum recourse initial rates for the Zone 1 expansion facilities.

39. Creole Trail requests a predetermination that it may roll the costs associated with the proposed Zone 1 facilities into its system rates in a future NGA section 4 rate proceeding. Creole Trail filed a three-year cost and revenue projection included as part of Exhibit N to its application. Creole Trail projects the revenues generated at the existing maximum recourse rate for Zone 1 exceed the cost of service over the three year projected period. Specifically, page 3 of Exhibit N shows that the first year projected

[45] Only one landowner filed comments regarding the potential impact of the project on his property.

[46] Exhibit N of Application at 11 and Exhibit Z at 2.

revenues of $38,822,612 equal the estimated cost of service of $38,822,612,[47] while projected revenues in both years 2 and 3 of $38,822,612 exceed the estimated cost of service for year 2 of $36,045,411 and year 3 of $33,514,346.

40. To receive authorization for rolled-in rate treatment, a pipeline must demonstrate that rolling in the costs associated with the construction and operation of new facilities will not result in existing customers subsidizing the expansion. In general, this means that a pipeline must show that the revenues to be generated by an expansion project will exceed the costs of the project. For purposes of making a determination in a certificate proceeding as to whether it would be appropriate to roll the costs of a project into the pipeline's system rates in a future NGA section 4 proceeding, the Commission will compare the cost of the project to the revenues generated utilizing actual contract volumes and the maximum recourse rate (or the actual negotiated rate if the negotiated rate is lower than the recourse rate).[48]

41. Creole Trail has only received "expressions of interest" from Sabine Pass and one other potential shipper for the proposed 1.5 Bcf per day of additional Zone 1 capacity. Creole Trail has not entered into binding precedent or service agreements to determine the revenues generated from the proposed additional capacity for Zone 1. As a result, no cost and revenue comparison can be made. In view of these considerations, the Commission denies the request for a predetermination supporting rolled-in rate treatment for the costs associated with the Creole Trail Expansion Project facilities in Zone 1. This denial is without prejudice to Creole Trail filing for and fully supporting rolled-in rate treatment for these facilities in a future NGA section 4 rate case.

ii. Fuel Rate

42. Creole Trail proposes to continue to recover fuel and lost and unaccounted for gas associated with Zone 1 facilities based on the fuel transportation percentage in accordance with section 6.15 of the General Terms and Conditions (GT&C) of its tariff.[49] Section 6.15 provides for both a semi-annual and an annual filing with a true-up mechanism to adjust the fuel transportation percentage. The Zone 1 fuel retention percentage of 0.37 percent set forth in Exhibit P of Creole Trail's application was the fuel retainage percentage in effect at the time of filing. The Zone 1 fuel retainage percentage

[47] The operating revenues of $38,822,612 for Zone 1 are based on rate design determinants and current maximum Zone 1 rates shown on Exhibit N at 11. *See* Creole Trail Data Response No. 8, filed April 29, 2014.

[48] *Tennessee Gas Pipeline Company, L.L.C.,* 144 FERC ¶ 61,219, at P 22 (2013).

[49] *See* Data Response No. 6 filed April 29, 2014.

charged as of the in-service date of the facilities proposed in this application will be the Zone 1 fuel retainage percentage in effect at that point in time.

43. The Commission interprets Creole Trail's proposal as a request for a finding supporting rolling the increased fuel requirements resulting from its Creole Trail Expansion Project for Zone 1 into its existing system-wide fuel percentage. Creole Trail did not provide workpapers supporting the recovery of fuel and lost and unaccounted for gas associated with Zone 1 as requested by the Commission's April 15, 2014 data request. Instead, Creole Trail states in its April 29, 2014 data response that the Zone 1 fuel retainage percentage of 0.37 percent set forth in Exhibit P of its application was the fuel retainage percentage in effect at the time of the filing. Creole Trail also proposes to charge the Zone 1 fuel retainage percentage in effect on the in-service date of the Creole Trail Expansion facilities.

44. The Commission finds that existing Zone 1 shippers may subsidize or be adversely affected by the fuel changes resulting from Creole Trail's Expansion Project for Zone 1. In view of these considerations, the Commission will require Creole Trail to file not less than 30 days, but not more than 60 days before the in-service date, workpapers supporting the recovery of fuel and lost and unaccounted for gas associated with the Zone 1 Expansion Project. If the workpapers show that the incremental fuel rate for the Zone 1 Expansion Project is lower than the system-wide fuel rate, Creole Trail will be required to charge the system-wide fuel rate. If the incremental fuel rate for the Zone 1 Expansion Project is higher than the system-wide fuel rate, Creole Trail will be required to charge the incremental fuel rate for the Zone 1 Expansion Project and to separately identify the incremental fuel associated with its Zone 1 Expansion Project.

b. Zone 2

i. Initial Rates

45. Creole Trail has proposed incremental initial recourse rates for services utilizing the Creole Trail Expansion Project Zone 2 facilities.[50] Creole Trail is proposing an initial rate for Rate Schedule FTS of $3.0464 per Dth per month, an initial rate for Rate Schedule ITS of $0.1002 per Dth, and an initial authorized overrun rate of $0.1002 per Dth.

46. Creole Trail asserts that the capital structure, rate of return, and debt cost amounts utilized in calculating its proposed rates are consistent with those approved in recent

[50] Creole Trail's existing Part 284 rate for Zone 1 of $4.4477 Dth per month does not apply to transportation service only in Zone 2. A shipper transporting gas through both zones would pay the Zone 1 Part 284 recourse rate and the Zone 2 incremental rate.

Creole Trail certificate orders.[51] Creole Trail states that the billing determinants underlying its proposed Rate Schedule FTS rates for Zone 2 service were determined using 95 percent of Zone 2 firm service capability, or 1,938,000 Dth per day.[52] The resulting Rate Schedule FTS initial recourse rate for Zone 2 is $3.0464. Creole Trail states that the Rate Schedule ITS billing determinants of 102,000 Dth per day were imputed based on an estimated Rate Schedule ITS throughput of 37,230,000 Dth. The resulting Rate Schedule ITS initial rate is $0.1002 per Dth.[53]

47. We have reviewed Creole Trail's proposed cost of service,[54] firm and interruptible rate designs, and fuel retentions rates and find they generally reflect the Commission's current policy. We will approve Creole Trail's proposed fuel retention rates. However, we find that Creole Trail's firm/interruptible rate proposal does not comply with the Commission's policy requiring new pipelines to allocate costs to all services (including interruptible and short-term firm transportation) or credit revenues generated by these services to maximum-rate shippers.[55]

48. The purpose of interruptible revenue credits or cost allocation is to protect the pipeline's customers from too low an allocation to interruptible service. An allocation of too little costs to interruptible service causes both the firm and interruptible maximum rates to be too high. Our policy regarding new interruptible services requires either a 100-percent credit of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers or an allocation of costs and volumes to these services.[56]

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[51] *Cheniere Creole Trail Pipeline, L.P.*, 142 FERC ¶ 61,137 (2013) and *Cheniere Creole Trail Pipeline, L.P.*, 122 FERC ¶ 61,301 (2008). Creole Trail further states that the capital structure accepted in these proceedings was 70 percent debt and 30 percent equity. Creole Trail states that the rate of return accepted in these proceedings was 14 percent and the debt cost was 7.75 percent.

[52] Exhibit N of Application at 11 and Creole Trail April 29, 2014 Data Response No. 9.

[53] Exhibit N at 11.

[54] As discussed below, we find that Creole Trail's proposed Allowance for Funds Used During Construction costs are not calculated properly.

[55] *See Transcontinental Gas Pipe Line Corp.*, 78 FERC ¶ 61,057, at 61,209 (1997).

[56] *See Georgia Strait Crossing Pipeline LP*, 98 FERC ¶ 61,271, at 62,055-56 (2002).

49. Creole Trail states that is has allocated five (5) percent of its costs to interruptible services.[57] In support of that statement, Creole Trail applied a 95 percent load factor design determinant of 23,256,000 Dth (1,938,000 Dth per day, times 12 months) along with a 95 percent allocation of costs to Zone 2 of $70,847,890 for developing its proposed firm incremental recourse rate of $3.0464 per Dth per month.[58] However, despite its statement to the contrary, Creole Trail's methodology did not allocate any costs to its interruptible transportation. If Creole Trial were to fully contract its certificated capacity to firm customers at its proposed maximum firm transportation rate, it would fully recover its cost of service solely from its firm customers. Hence, if Creole Trail were to provide any interruptible services, it would over-recover its cost of service. This outcome is contrary to our policy. Thus, we will reject Creole Trail's initial rates calculation. When Creole Trail files its tariff in compliance with this order, Creole Trail is required to revise its initial rates or tariff in accordance with our policy (i.e., either imputing billing determinants and costs to its interruptible service or providing for the crediting of interruptible revenues).[59]

50. All other aspects of Creole Trail's facilities, services, and tariff previously authorized by the Commission remain unchanged. The Commission finds that Creole Trail's proposed Zone 2 initial rates, if revised to reflect the Commission's rate design determinants discussed above, are cost-supported. Thus, the Commission approves the proposed initial rates for Zone 2 conditioned upon Creole Trail's either revising its interruptible rate or revising its tariff to reflect interruptible revenue crediting, as discussed above.

ii. Fuel Rate

51. Zone 2 facilities include the proposed Mamou Compressor Station, which will use fuel for compression. For Zone 2, Creole Trail proposes an initial fuel retainage percentage of 0.70 percent based on Creole Trail's estimate of the fuel and lost and unaccounted for gas requirements associated with Creole Trail's Expansion Project. Creole Trail states that the fuel retention percentage for Zone 2 will be trued up in accordance with section 6.15 of its GT&C.

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[57] Exhibit N of Application at 11 and Creole Trail April 29, 2014 Data Response No. 9.

[58] *Id.*

[59] *See Corpus Christi Liquefaction, LLC and Cheniere Corpus Christi Pipeline, L.P.* (*Corpus Christi Liquefaction*), 149 FERC ¶ 61,283, at PP 37-39 (2014).

52. The Zone 2 Expansion Project facilities are a greenfield project with additive rates for Zone 1 service and will not adversely affect existing Zone 1 shippers. Thus, the Commission approves the initial fuel retainage percentage of 0.70 percent for Zone 2. The Commission will require Creole Trail to file no less than 30 thirty days, but not more than 60 days before the in-service date, the initial fuel percentage of 0.70 percent associated with the fuel requirements resulting from its Creole Trail Expansion Project for Zone 2. The Commission will also require Creole Trail to track initial fuel use associated with its Expansion Project for Zone 2 pursuant to section 6.15 of its GT&C.

3. Record-Keeping for Facility Costs

53. The Commission directs Creole Trail to keep separate books and accounting of costs attributable to the proposed facilities. The books should be maintained with applicable cross-references, as required by section 154.309 of the Commission's regulations.[60] This information must be in sufficient detail so that the data can be identified in Statements G, I, and J in any future NGA section 4 or 5 rate case and the information must be provided consistent with Order No. 710.[61] Such measures protect existing customers from cost overruns and from subsidization that might result from under-collection of the project's incremental cost of service, as well as assist the Commission and parties to the rate proceedings to determine the costs of the project.

4. Accounting

54. In Exhibit K, Creole Trail estimates the capitalized Allowance for Funds Used During Construction (AFUDC) at approximately $53.2 million. However, we find that Creole Trail overstated the amount of AFUDC that it included in the estimated cost of the project because it took a full month's AFUDC on current month construction expenditures.[62] Since current month construction expenditures occur throughout the month, only one-half month's AFUDC should be accrued on current month's construction expenditures to reflect the fact that, on average, these expenditures are outstanding for only half the month.[63]

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[60] 18 C.F.R. § 154.309 (2014).

[61] *Revisions to Forms, Statements, and Reporting Requirements for Natural Gas Pipelines*, Order No. 710, FERC Stats. and Regs. ¶ 31,267 (2008).

[62] *See* Applicants' October 3, 2014 Responses to Data Request.

[63] *See Kern River Gas Transmission Co.*, 98 FERC ¶ 61,205 (2002); *Rockies Express Pipeline LLC*, 128 FERC ¶ 61,036 (2009).

55. In addition, we find that Creole Trail understated the amount of AFUDC that it included in the estimated cost of the project because it did not include the month's beginning balance of construction expenditures in the allowance base for calculating AFUDC during certain months. Creole Trail only included the current month's expenditures in the allowance base.

56. In order to ensure that construction cost is properly stated, we will require Creole Trail to revise its procedures for estimating and calculating AFUDC and take only one-half month's AFUDC on current month's construction expenditures and include the month's beginning balance of construction expenditures in the allowance base.

C. Environmental Review

57. On June 7, 2013, the Commission issued a Notice of Intent to Prepare an Environmental Assessment (EA) for the planned projects, a request for comments on environmental issues, and notice of public scoping meetings (NOI). The NOI was mailed to interested parties, including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American tribes; local libraries and newspapers; and affected property owners.

58. In response to the NOI, the Cameron Parish Police Jury, the Sierra Club, the U.S. Army Corps of Engineers (Corps of Engineers), and the U.S. Fish and Wildlife Service (FWS) filed comments. The Cameron Parish Police Jury filed a comment in support of the projects. The Corps of Engineers, as part of its role as a cooperating agency, commented about the information in the draft resource reports; the FWS commented about the federally listed endangered red-cockaded woodpecker, the Sprague's pipet which is a candidate species for federal listing, migratory bird impacts due to impacts on upland forests, bald eagles, colonial birds, wetlands, and wetland mitigation banks. The Sierra Club commented on the need for an environmental impact statement (EIS) rather than an environmental assessment, a programmatic EIS for liquefied natural gas exports, including natural gas development, and greater review of impacts on water, recreation, and air resources.

59. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA),[64] our staff prepared an EA for the proposed projects. The EA was prepared with the cooperation of the Corps of Engineers, U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), and DOE. The analysis in the EA addresses geology, soils, water resources, wetlands, vegetation, fisheries, wildlife, threatened and endangered species, land use, recreation, visual resources, cultural

[64] 42 U.S.C. § 4321, *et seq*. (2012).

resources, air quality, noise, safety, socioeconomics, and alternatives. The EA addressed all substantive comments received in response to the NOI.

60. The EA was issued for a 30-day comment period and placed into the public record on December 12, 2014. The Commission received comments on the EA from the Corps of Engineers; the EPA; the United States Department of Commerce, including the National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service (NMFS); the Sierra Club; and Dr. Patrick Savoy.

1. Landowner Impacts

61. Dr. Savoy states that the Creole Trail Expansion Project would cross his property in Evangeline Parish. He states that it would also cross Davis Creek and its surrounding woodland and that these features are crucial to the ecology of the region. Further, he states that the creek is the major route of water drainage to the region and is essential to the habitat of the residing wildlife. He states there are many alternatives to the proposed route.

62. The proposal's impacts on waterbodies, forests, and wildlife are addressed in EA sections 2.2.1.2, 2.3.1, and 2.3.2, respectively.[65] The EA concludes that impacts on these resources would not be significant based on implementation of the EA's mitigation measures. EA section 3 addresses proposal alternatives,[66] including several short route realignments or modifications, some of which were incorporated into the proposed pipeline routes. Dr. Savoy did not specify any specific alternative routes, so they could not be evaluated. However, additional minor route changes may be accommodated pursuant to this order's Environmental Condition 5, if they are feasible. Therefore, Dr. Savoy may choose to discuss minor changes with Creole Trail during easement negotiations.

2. Threatened or Endangered Species

63. The FWS comments that if suitable nesting or foraging habitat for the federally endangered red-cockaded woodpecker was found within the project area, all suitable nesting habitat within the project area and within a one-half mile radius from such habitat should be carefully surveyed by a qualified biologist for the presence of red-cockaded woodpecker cavity trees. Federally listed threatened and endangered species are addressed in section 2.3.3 of the EA.[67] Three areas in Allen and Calcasieu Parishes were

[65] EA at 35-39, 47-50, and 50-53, respectively.

[66] *Id.* at 173-182.

[67] *Id.* at 53 and 54.

identified as having potential habitat, and each survey site was evaluated by Creole Trail using FWS-recommended procedures. No red-cockaded woodpecker were heard or observed, no nesting or roosting cavities were observed, and the potential nesting habitat did not possess cavity trees. The survey report determined that the red-cockaded woodpecker may occur in the project area, but it is not likely to be adversely affected by the Creole Trail Expansion Project. In a letter dated November 14, 2013, the FWS concurred with this determination. We also concur.

64. The American chaffseed was also identified as potentially occurring within the project area. No American chaffseed or any habitat pimple mounds were observed during the field surveys in the project area. However, access to portions of the Creole Trail Expansion Project had not yet been granted by October 2014 when the EA was being prepared, preventing threatened and endangered species surveys along about 6.4 miles of pipeline routes. Therefore, the EA appropriately recommends and Environmental Condition 18 of this order requires that, prior to beginning construction between mileposts (MPs) 96.07 and 96.77 of the proposed pipeline, Creole Trail consult with the FWS to determine if surveys for the American chaffseed are necessary within the unsurveyed tracts of the pipeline, and file the results of that consultation with the Commission prior to construction being authorized.[68] If necessary, environmental condition 5b requires implementation of endangered, threatened, or special concern species mitigation measures.

3. Forested Land and Revegetation

65. Forest impacts are addressed in EA section 2.3.1.[69] About 455 acres of forested land (including 188 acres of pine plantation) would be affected during construction, about 276 acres would be allowed to revert back to forest, and about 179 acres would be retained for operation of the Creole Trail Expansion Project within the 50-foot-wide operational right-of-way. Clearing forested areas will result in limited habitat alteration and fragmentation. To minimize potential impacts, Creole Trail will construct the pipeline parallel to existing pipeline rights-of-way or other linear infrastructure (i.e., publically maintained roads) where possible. Revegetation of the construction right-of-way would be in accordance with the Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan* and recommendations from regional offices of the Natural Resources Conservation Service, other agencies, or landowners. Generally, the non-agricultural areas will be seeded with mixes favorable to wildlife and then allowed to revegetate through natural succession. The EA appropriately concludes that construction

[68] *Id.* at 55.

[69] *Id.* at 49 and 50.

and operation of the Creole Trail Expansion Project would not have significant impacts on vegetation, including forests.

4. Migratory Birds

66. Migratory birds are addressed in EA section 2.3.2.1 of the EA.[70] Indirect impacts on migratory birds from the construction of the Creole Trail Expansion Project are expected to be minimal.[71] Conversion of forested lands to grasslands would reduce tree cover, but the surrounding areas provide similar, suitable habitat, so displacement would be limited. Direct impacts from the construction of the Creole Trail Expansion Project would occur, but would be limited to the period of active construction. As a result, impacts on migratory birds would be short-term and would not result in population-level impacts, although construction could impact individual birds and/or nests. However, because construction is proposed to occur within the nesting season and FWS has not provided specific comments regarding migratory bird impacts, the EA recommends and Environmental Condition 17 of this order requires that prior to beginning construction, Creole Trail file with the Commission documentation of its consultation with the FWS regarding the project impacts on migratory birds for review and written approval by the Director of the Office of Energy Projects (OEP).

5. Bald Eagles

67. The EA addresses impacts on bald eagles.[72] Creole Trail's field reconnaissance surveys from April 2013 to August 2013 identified little suitable habitat along the project pipeline route, and no bald eagles or their nests were observed. Based on the distance of the project components from large waterbodies, and the lack of suitable nesting habitat, no impact on bald eagles is expected from construction and operation of the projects. However, because the projects are within floodplains of the Calcasieu and Mermentau Rivers, the FWS recommended that all field personnel be trained to be aware of the potential presence of nesting bald eagles. The Commission concurs with FWS's recommendation. Creole Trail will require all personnel working on the project to attend environmental awareness training which will include minimizing impacts on nesting birds, including bald eagles.

[70] *Id.* at 51.

[71] *Id.* at 52 and 53.

[72] *Id.* at 51.

6. Wetlands Impacts

68. The FWS comments that wetland impacts should be minimized. It recommends the use of horizontal directional drills (HDD) at all major waterbody crossings and across areas of mature swamp, bottomland hardwood forests and marsh. Creole Trail will use HDDs at 14 locations to minimize impacts on these types of resources.[73] The FWS recommends that where an HDD is not used, the push-pull method be utilized to avoid/minimize jurisdictional wetland impacts. Wetland construction methods described in EA section 1.7.1[74] includes the push-pull method.

69. The FWS recommends that pipeline routes be collocated with existing rights-of-way and all rights-of-way should be restricted to 75-feet. Creole Trail plans to generally use a 120-foot-wide construction right-of-way,[75] but would use only an 85-foot-wide construction right-of-way through forested wetlands.[76] The EA reviewed Creole Trail's request to use a wider than 75-foot construction right-of-way within the boundaries of a wetland, which the Creole Trail contends is necessary due to the installation of a 42-inch diameter pipeline, the size of the associated construction equipment, and the soil conditions in the area which require a wider trench to manage potential slumping of soil. The EA concludes that these circumstances justify Creole Trail's request.[77] We agree.

70. The FWS comments that compressor stations, main line valves, and temporary workspaces should be located outside of wetlands and that the need to place such project features within wetlands must be justified with adequate factual detail. The EA states that the proposed Mamou Compressor Station and other aboveground facilities would not be constructed in wetlands.[78] Creole Trail provided site-specific reasons for placing

[73] *Id.* at 16 and 17.

[74] *Id.* at 15 and 16.

[75] *Id.* at 120.

[76] *Id.* at 53.

[77] *Id.* at 35.

[78] *Id.* at 57, Table 2.4-1.

additional temporary workspaces within 50 feet of wetlands and waterbodies.[79] Commission staff reviewed these proposals and concluded that they were reasonable.[80]

71. The FWS comments that any proposed permanent or temporary access roads should be located outside of wetlands and that the need to place such project features within wetlands must be justified with adequate factual detail. In addition, any such roads should also contain the appropriate features (e.g., appropriate-sized culverts) necessary to maintain wetland hydrology or stream morphology. Section VI.B.1.d of Sabine Pass' and Creole Trail's Wetland and Waterbody Construction and Mitigation Procedures state that the only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetlands. All of the temporary access roads are existing roads.[81] All of the proposed access roads have an industrial/commercial land use and would not be within wetlands.[82]

72. The FWS comments that the Creole Trail Expansion Project may impact the Clear Creek Mitigation Bank. The EA addresses this as well as the pipeline's crossing of the Calcasieu Mitigation Bank in section 2.2.3.[83] The Corps of Engineers, Galveston District, comments that the Liquefaction Expansion Project site is located in jurisdictional wetlands adjacent to the Sabine Pass Channel, in Cameron Parish, Louisiana. It states that Table 1.9-1 should be corrected to show in the "Status" column that a Nationwide Permit 12 was verified for SWG-2013-00898, not a Nationwide Permit 14. This correction has been incorporated into this order.

73. The EPA suggests that compensatory mitigation for wetlands may be required for both permanent and temporary impacts to jurisdictional wetlands. The EPA maintains that each wetland type should be mitigated with in-kind mitigation credits. In particular, impacts on estuarine intertidal wetlands should only be mitigated with tidally influenced wetlands. The EPA asserts that additional mitigation may be required for impacts occurring in existing mitigation banks, if those crossings are approved by the Corps of Engineers.

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[79] *Id.* at Appendix 2, Table 1.

[80] *Id.* at 39, Table 2.2-4.

[81] *Id.* at Appendix 3, Table 3-2.

[82] *Id.* at 58, Table 2.4-1.

[83] *Id.* at 46-47.

74. Wetland mitigation is addressed in the EA.[84] The Corps of Engineers will review and approve wetland mitigation plans pursuant to its permitting process. Sabine Pass and Creole Trail are required to file the wetland mitigation plans prior to beginning construction. The EA states that two wetland mitigation banks would be crossed by the Extension between MPs 99.0 and 100.42, the Clear Creek Mitigation Bank and the Calcasieu Mitigation Bank. The pipeline expansion would parallel an existing Texas Eastern Transmission, LP pipeline right-of-way while crossing these mitigation banks. The area crossed includes 1.0 mile of open land and 0.42 mile of forested land. The total length of the Clear Creek Mitigation Bank crossing would be about 0.95 mile and the Calcasieu Mitigation Bank crossing would be about 0.47 mile. Because Creole Trail has not completed its permitting process with the Corps of Engineers, Environmental Condition 15 states that prior to beginning construction between MPs 99 and 100.42, Creole Trail must file with the Commission documentation of approval from the mitigation bank owners and the Corps of Engineers authorizing crossing of the Clear Creek Mitigation Bank and Calcasieu Mitigation Bank.

7. Essential Fish Habitat

75. The NMFS comments that it agrees with the EA that the expansion of the liquefaction facilities would not impact designated essential fish habitat or marine fishery resources. Further, NMFS states that it also agrees with the conclusion in the EA that construction of the pipelines would result only in temporary, minimal impacts on essential fish habitat. We concur with the EA's conclusion.

8. Soils

76. The EPA comments that because the project would permanently impact about 43.3 acres of prime farmland soils, consultation with the National Resource Conservation Service[85] under the Farmland Protection Policy Act is required. The EPA recommends that Farmland Protection Policy Act consultation with the National Resource Conservation Service be included in Table 1.9.1 of the EA. The EA addresses prime farmland soils.[86] However, we note that the Farmland Protection Policy Act does not apply to federal permitting or licensing.[87] Therefore, there is no need to include the suggested reference in Table 1.9.1.

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[84] *Id.* at 45-46.

[85] The NRCS is part of the U.S. Department of Agriculture.

[86] *Id.* at 31-32 and 61.

[87] http://www.nrcs.usda.gov/wps/portal/nrcs/detail/?cid=nrcs143_008275.

9. Water Resources

77. The EPA comments about the Chicot Aquifer, a sole-source aquifer in Louisiana, that underlies the project. It states that the EA concludes that impacts on groundwater would be temporary and that groundwater and drinking water quality, and supply, would not be significantly altered by the project. However, the EPA states that under section 1424(4) of the Safe Drinking Water Act of 1974, consultation with the EPA is required and that Table 1.9.1 should include sole-source aquifer consultation with the EPA. It recommends completing sole-source aquifer consultation with the EPA.

78. The Chicot Aquifer and groundwater are described in the EA.[88] The Safe Drinking Water Act does not regulate private wells which serve fewer than 25 individuals.[89] In Louisiana, the Wellhead Protection Program was created pursuant to the Safe Drinking Water Act Amendments of 1986. Elements from the Wellhead Protection Program and its Source Water Assessment Program are part of the Louisiana Department of Environmental Quality's (Louisiana DEQ) Drinking Water Protection Program. The Drinking Water Protection Area around a wellhead ranges from a 1,000-foot to a one-mile radius depending on the well depth. All public water systems that have a completed source water assessment must also complete a contingency plan to have an approved wellhead protection program. Once the contingency plan is completed, an approval certificate is sent to the water system by Louisiana DEQ. The contingency plan is also filed with the local Office of Emergency Preparedness, as they may become involved with a water system in the event of an emergency loss of water, or other water system emergency. Creole Trail will place "Drinking Water Protection Area" signs on the highways where they cross the boundaries of wellhead protection areas and will eventually replace the Wellhead Protection Area signs that still remain on some highways.

79. The EA states that there are no groundwater withdrawal areas within 0.5 mile of the Sabine Pass LNG Terminal and no wellhead protection areas at or near the terminal. One wellhead protection area will be crossed by the Creole Trail Expansion Project between MPs 124.5 and 126.7.[90] This is a wellhead protection area for the East Allen Parish Water Works which has no additional required mitigation measures beyond the standard practice of calling Dig Safe before commencing construction activities. We agree that Sabine Pass and Creole Trail should consult with the EPA about additional sole source aquifer consultation that may be required pursuant to the Safe Drinking Water

[88] EA at 33-34.

[89] http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm.

[90] EA at 34.

Act. Therefore, we have added a new requirement for such consultation in Environmental Condition 65.

80. The EPA also comments about surface water. It states that there is a 2006 database of the State of Louisiana's assessment of designated uses of the Sabine Pass Channel in recent Louisiana Section 305b water quality inventories. This database updates the 2002 database that is referenced in the EA.[91] The EPA comments that the updated data list the water quality in the Sabine Pass Channel as "good" and that its water quality meets all of the designated uses. We have reviewed the 2006 database,[92] and herein modify the information provided in the EA to reflect this information.

10. Invasive Species

81. The EPA comments that section 2.4.3 of the EA, Visual Resources, states that vegetated and forested areas cleared for construction that are not within the permanent right-of-way would be allowed to regenerate naturally. The EPA states that natural revegetation will apply to about 1,473 acres and that taking an established forested or vegetated area and creating a disturbed area could allow unwanted or invasive species to become established. The EPA, therefore, recommends that the Commission monitor the area to make sure unwanted species do not establish in the areas designated for natural revegetation. If necessary, a plan should be developed to eradicate unwanted species for the area. It states this can be done by treatment, restorative planting, or seeding with native species endemic to the area.

82. The EA addresses invasive species in section 2.3.1, vegetation.[93] During restoration, Creole Trail will implement appropriate removal/control techniques for nuisance species that are found to occur in greater densities than in adjacent undisturbed areas. Additionally, Creole Trail will implement additional measures to minimize the spread of the Chinese tallow tree. These measures will include installing sediment/erosion control devices at the base of slopes leading to wetlands, expediting construction in and around wetlands and limiting equipment and construction activities, using equipment (e.g., balloon-tires, timber mats) that will minimize soil surface disturbance, segregating topsoil from the subsoil, and monitoring the right-of-way for 3 to 5 years following restoration. Monitoring includes filing reports with the

[91] *Id.* at 35.

[92] http://ofmpub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=&p_au_id=LA110304_00&p_cycle=2006&p_state=LA

[93] EA at 50.

Commission about the success of restoration. We find these measures to be acceptable and, therefore, additional mitigation measures are not needed.

11. Air Quality

83. The closest designated Class I area (Breton National Wildlife Refuge) is about 450 kilometers (279 miles) from the LNG Terminal and 330 kilometers (204 miles) from the proposed Mamou Compressor Station. The EPA states that the EA incorrectly cites a 100 kilometer distance (62 miles) for notifying the appropriate federal land managers of Class 1 areas of sources subject to the Prevention of Significant Deterioration (PSD) air permitting program under the Clean Air Act.[94] The EPA asks the Commission to clarify that EPA and the federal land managers recommend notification of those managers if a PSD project is proposed to be located within 300 kilometers of a Class I area.

84. A 1992 EPA memo advises that notice should be made for sources within 100 kilometers of a Class I area and that very large sources may require notification at further distances, on a case-by-case basis.[95] The EA states that the project is subject to PSD permitting requirements delegated to Louisiana DEQ. Louisiana DEQ's long-term strategy for addressing regional haze on Class 1 areas includes a triennial review of emission inventories of stationary sources within 100 kilometers of the Breton National Wildlife Refuge.[96] Louisiana DEQ's PSD modeling procedures also reference the use of a 100 kilometer distance for Class 1 areas.[97] However, Louisiana DEQ regulations for implementing the PSD program state that Louisiana DEQ is responsible for notifying federal land managers of any PSD permit application which may affect the Class 1 area.[98]

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[94] *Id.* at 88.

[95] *See* "*Clarification of Prevention of Significant Deterioration (PSD) Guidance for Modeling Class I Area Impacts*" issued October 19, 1992, available on the EPA website at: http://www.epa.gov/region7/air/nsr/nsrmemos/class1.pdf.

[96] *See* "*Louisiana Region Haze SIP – Chapter 1*" submitted June 13, 2008, available on the LDEQ website at: http://www.deq.louisiana.gov/portal/Portals/0/AirQualityAssessment/Planning/SIP/RegHaze-Chap1-Final0608.pdf.

[97] *See* "*Air Quality Modeling Procures*", issued August, 2006, available on the LDEQ website at: http://www.deq.louisiana.gov/portal/Portals/0/permits/air/Air%20Quality%20Modeling%20Procedures.pdf

[98] Title 33 of Louisiana Administrative Code section 509 at ¶ 1.

Therefore, compliance with this permitting program and notifications for Class 1 area land managers (for a minimum of 100 kilometers) would be required under Louisiana DEQ's oversight.

85. The EPA requests that the detailed information on air emission estimates for tug vessels be provided in the EA or an appendix. The EA is a summary document of all construction and operating information and analyses performed for the project. However, all assumptions and detailed calculations, including those related to tugs, are publicly available as part of Resource Report 9 for Sabine Pass and Creole Trail's applications and supplemental filings for the projects.

86. The EPA notes that the background nitrogen dioxide concentration identified in Table 2.7-14 of the EA for both the annual and 1-hour averaging periods is the same, and requests that this discrepancy be rectified. However, the footnote in Table 2.7-14 of the EA clarifies that the 1-hour background value was also conservatively used for the annual background value. Because this value is overly conservative, no modification to the analysis is needed.

87. The EPA claims that the photochemical modeling presented in the EA incorrectly concludes that ozone levels in Louisiana and the Beaumont/Port Arthur area would not increase.[99] We disagree. The photochemical (ozone) modeling filed by Sabine Pass on February 27, 2014, and supplemented on April 14, 2014, considered modeled ozone levels at 65 monitors in the Baton Rouge Metropolitan Statistical area, the Beaumont/Port Arthur area, and the Houston/Galveston/Brazoria area. This ozone modeling study showed increases in ozone levels at only 6 (of the 65) monitors, all of which are located in Texas. Therefore, the EA concludes that in Louisiana ozone levels would not increase at the monitoring locations, and in Texas no new violations of the 8-hour ozone National Ambient Air Quality Standards would occur and/or no increase in the severity and/or frequency of existing violations would occur. The EA's conclusion that impacts on ozone levels would not be significant is appropriate.

12. Induced Gas Production

88. The Sierra Club and EPA assert that the exportation of liquefied natural gas will increase domestic gas production and that the Commission must analyze the potential environmental impacts of such production, at least at a conceptual level, as part of its consideration of the projects before it. The Sierra Club asserts that tools exist which

[99] EA at 106.

would enable the Commission to accurately predict where additional production induced by exports would occur.[100]

89. The Council on Environmental Quality's (CEQ) regulations require agencies to consider the direct, indirect, and cumulative impacts of proposed actions. Indirect impacts are "caused by the proposed action and are later in time or farther removed in distance" than direct project impacts, but are still "reasonably foreseeable."[101] Indirect impacts "may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[102] For an agency to include consideration of an impact in its NEPA analysis as an indirect effect, approval of the proposed project and the related secondary effect must be causally related, i.e., the agency action and the effect must be "two links of a single chain."[103]

90. The potential environmental effects associated with shale gas development are neither sufficiently causally related to the Liquefaction and Creole Trail Expansion Projects to warrant a detailed analysis nor are the potential environmental impacts reasonably foreseeable, as contemplated by the CEQ regulations.[104] Shale production is not an essential predicate for these projects, which will receive natural gas through interconnects with other natural gas pipelines. These interconnecting pipeline systems span multiple states with shale as well as conventional gas formations. Further, development of shale gas will likely continue regardless of whether the projects are approved.

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[100] The Sierra Club specifically references EIA's National Energy Modeling System and Deloitte Marketpoint's world gas model. January 12, 2015 Comments at 2.

[101] 40 C.F.R. § 1508.8(b) (2014).

[102] *Id*.

[103] *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 398 (9th Cir. 1989).

[104] *See, e.g., Central New York Oil and Gas Co., LLC*, 137 FERC ¶ 61,121, at PP 81-101 (2011), *order on reh'g*, 138 FERC ¶ 61,104, at PP 33-49 (2012), *petition for review dismissed, sub nom; Coalition for Responsible Growth v. FERC*, 485 Fed. Appx. 472, 474-75 (upholding the Commission's analysis of the development of Marcellus shale natural gas reserves where the Commission reasonably concluded that the impacts of that development were not sufficiently causally-related to the projects to warrant a more in-depth analysis).

91. Moreover, even if such a causal relationship were shown, the scope of the *impacts* from any such induced production is not reasonably foreseeable as contemplated by CEQ's regulations and case law. An impact is reasonably foreseeable if it is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision."[105] Courts have noted the starting point of any NEPA analysis is a "rule of reason," under which NEPA documents "need not address remote and highly speculative consequences."[106] While courts have held that NEPA requires "reasonable forecasting," an agency is not required "to engage in speculative analysis" or "to do the impractical, if not enough information is available to permit meaningful consideration."[107] The models Sierra Club suggests for Commission use will only provide generalized predictions regarding the potential location of any production which might be induced by exports. As the Commission has stated before, even knowing the identity of a supplier of gas to be shipped on a pipeline, and the general area where a producer's existing wells are located, does not enable the Commission to forecast (as opposed to speculate about) the number, location, or timing of the development of the new or existing wells that might produce the gas which will be transported on the project facilities over their lifespans.[108] In the absence of such information, the Commission in turn cannot forecast and analyze the specific impacts which might be associated with any additional production. No party has presented or referenced any accepted, detailed information that quantifies the environmental impacts of producing natural gas in the specific areas from which the proposed projects might receive their supplies. Accordingly, we find that even if we were to find the required causal relation, which we do not, there is not sufficient information available regarding potential upstream impacts to develop an analysis which would assist the Commission in either choosing between alternatives or developing mitigation measures.

92. The Commission recently considered and rejected the same arguments regarding the induced production argument in *Corpus Christi Liquefaction, LLC*.[109] As we concluded there, the impacts from induced natural gas production are not indirect effects of the project before us.

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[105] *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992).

[106] *Hammond v. Norton*, 370 F.Supp.2d 226, 245-46 (D.D.C. 2005).

[107] *N. Plains Res. Council v. Surface Transp. Board.*, 668 F.3d 1067, 1078 (9th Cir. 2011).

[108] *See, e.g., Tennessee Gas Pipeline, Co., L.L.C.*, 150 FERC ¶ 61,160, at P 62 (2015).

[109] 149 FERC ¶ 61,283 at PP 118-120.

13. Greenhouse Gas Emissions

93. While recognizing the challenges associated with analyzing impacts associated with increased natural gas production and end use consumption, the EPA and Sierra Club recommend that it is appropriate for the Commission to incorporate the results of DOE's recent reports[110] on LNG exports into the EA.

94. The Commission has reviewed the DOE Addendum and Life Cycle reports and finds they provide no basis to alter the conclusions of the EA. While the DOE Addendum report provides certain general estimates about the environmental impacts associated with natural gas production, those impacts have no particular relationship to the proposal before us. In its own report, DOE explained:[111]

> By including this discussion of natural gas production activities, DOE is going beyond what NEPA requires. While DOE has made broad projections about the types of resources from which additional production may come, DOE cannot meaningfully estimate where, when, or by what method any additional natural gas would be produced. Therefore, DOE cannot meaningfully analyze the specific environmental impacts of such production, which are nearly all local or regional in nature... As DOE explained in Sabine Pass Liquefaction, LLC, DOE/FE Order NO 2961-A (August 7, 2012), lacking an understanding of where and when additional gas production will arise, the environmental impacts resulting from production activity induced by LNG exports to non-FTA countries are not "reasonably foreseeable" within the meaning of the CEQ's NEPA regulations.

95. Similarly, countries seeking to import natural gas will continue to negotiate and find natural gas supplies. Therefore, end use consumption of natural gas will likely occur regardless of whether the project is approved. Although the Life Cycle report concludes that LNG exports will not increase the life-cycle GHG emissions, the report also contains

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[110] *See* "Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States," issued May 29, 2014, available on the DOE website at: http://energy.gov/sites/prod/files/2014/05/f16/Addendum_0.pdf, and "Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas," issued May 29, 2014, available on the DOE website at: http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf. (A Life-Cycle GHG analysis compares medium and long distance LNG export scenarios with regional fuel alternatives in the destination import markets).

[111] DOE Addendum report at 2.

limitations and uncertainty in the modeling data. Accordingly, the Commission believes the information provided in the DOE Addendum and Life Cycle reports is too general to assist us in our consideration of the specific proposal before us.

96. The Sierra Club comments that the projects would result in greenhouse gas (GHG)[112] emissions and indirectly impact water and air resources. Impacts on water resources are addressed in EA section 2.2;[113] and impacts on air resources, including an analysis of GHG, are addressed in EA sections 2.7.1[114] and 2.9.15.[115] The EA concludes that construction and operation of the projects will not significantly impact these resources.

97. Recognizing that the EA includes "helpful" discussion of the GHG emissions associated with construction of the project and annual emissions from the operation of the facility, the EPA and Sierra Club recommend the Commission also consider and disclose the GHG emissions associated with the production, transport, and combustion of the natural gas as part of decision making process. As described above, we do not believe such emissions to be causally related to our action in approving the project. Moreover, as the Commission has previously stated, there is no standard methodology to determine whether, and to what extent, a project's incremental contribution to GHGs would result in physical effects on the environment, either locally or globally.[116]

98. The EPA also points out that the draft EIS for the Jordan Cove Energy and Pacific Connector Gas Pipeline Project (Jordan Cove Project)[117] included calculations for GHG emissions from end use of the gas to be exported by the facility and urges the Commission to include the same calculations here.

99. Each project the Commission reviews is evaluated for its site-specific impacts. Simply because one project includes a unique analysis does not mean that the same

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[112] Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

[113] EA at 33 - 47.

[114] *Id.* at 80-110.

[115] *Id.* at 167-171.

[116] *See, e.g., Corpus Christi Liquefaction,* 149 FERC ¶ 61,283 at P 122.

[117] Jordan Cove Energy Project's Docket No. CP13-483-000 and Pacific Connector Gas Pipeline Project's Docket No. CP13-492-000.

analysis can be performed for all projects. Unlike Oregon, Louisiana did not undertake and file a life-cycle GHG analysis to supplement the Commission's environmental review. Because we do not have, as we did in Jordan Cove, information regarding the destination of the LNG, which in turn would allow us to estimate the emissions that would occur while transporting the gas, we cannot provide the same analysis we included in the Jordan Cove draft EIS. Further, as explained above, we do not believe that the information provided in the DOE report is specific enough to assist us in evaluating the proposal at hand.

100. The EPA suggests that the Commission should have used the recently-issued CEQ Revised Draft Guidance for *Greenhouse Gas Emissions and Climate Change Impacts* in considering GHG emissions in this proceeding.[118] Similarly, the Sierra Club questions the significance of the project's GHG emissions without the use of methodologies outlined in this revised guidance document. We note, however, that the revised guidance was not issued until after the EA in this proceeding was issued. The EA's environmental analysis included a quantitative analysis of GHG emission estimates, discussion of potential and/or reasonable alternatives or mitigation measures to improve efficiency and/or emissions, analysis of climate change impacts in the project region, and consideration of resiliency alternatives/measures for the effects of climate change on the projects.

101. The Sierra Club suggests that the Commission use the social cost of carbon tool to estimate the comprehensive costs associated with the project's GHG emissions. The tool provides monetized values, on a global level, of addressing climate change impacts and is intended for estimating the climate benefits of rulemakings and policy alternatives. While we recognize the availability of this tool, we believe that for the following reasons, it would not be appropriate or informative to use for this project: (1) the EPA states that "no consensus exists on the appropriate [discount] rate to use for analyses spanning multiple generations"[119] and consequently, significant variation (between 300 and 400 percent) in output can result;[120] (2) the tool does not measure the actual incremental

[118] "Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts" issued on December 18, 2014, available on CEQ's website at http://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf.

[119] *See Fact Sheeet: Social Cost of Carbon* issued by EPA in November 2013, *available at* http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf.

[120] Sierra Club states that use of the tool would calculate a social cost of carbon of $140 billion annually (based on the year 2030). We believe the Sierra Club mistakenly stated $140 *billion* rather than *million*. However, depending on the various published

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impacts of a project on the environment; and (3) there are no established criteria identifying the monetized values that are to be considered significant for NEPA purposes. While the tool may be useful for rulemakings or comparing alternatives using cost/benefit analyses where the same discount rate is consistently applied, it is not appropriate for estimating a specific project's impacts or informing our analysis under NEPA.

14. Safety

102. The project facilities will be designed, constructed, operated, and maintained in accordance with the DOT's federal standards, which are intended to protect the public by preventing or mitigating LNG and natural gas pipeline failures or accidents, and ensure safe operation of the facilities.[121] The EA evaluates the safety of the LNG terminal and the pipeline. As part of the evaluation of the LNG terminal, Commission staff performed a technical review of the preliminary engineering design and concluded in the EA that sufficient layers of protection will be included in the facility design to mitigate the potential for an incident that could impact the safety of the public.[122] DOT reviewed the data and methodology Sabine Pass used to determine the single accidental leakage sources for the design spills based on the flow from various leakage sources including piping, containers, and equipment containing LNG, refrigerants, and flammable fluids. On April 11, 2014, DOT issued Commission staff a letter stating that DOT had no objection to Sabine Pass's methodology for determining the single accidental leakage source for the candidate design spills to be used in establishing the Part 193 siting requirements for the proposed Liquefaction Expansion facilities.[123]

103. In accordance with 33 C.F.R. Part 127, the U.S. Coast Guard reviewed the Liquefaction Expansion Project and stated that a Letter of Intent or revision to the existing Waterway Suitability Assessment is not required for the Liquefaction Expansion Project because the proposed modifications are outside the Marine Transfer Area.[124] Based on Commission staff's engineering design analysis and recommendations for the

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discount rate used, the tool would project costs ranging from $46 million to $218 million annually over the chosen time frame, a difference in potential results of over 370 percent.

[121] *See* 49 C.F.R. pt. 193 (2014).

[122] EA at 136.

[123] Letter from Ken Lee. PHMSA based its decision on Sabine Pass's Supplement to Appendix Q.13 and Sabine Pass's responses to FERC/PHMSA Data Requests.

[124] Attachment 2 of the Request to Initiate the Pre-filing Review Process under PF13-8-000.

LNG terminal, the EA concludes that the projects will not result in significantly increased public safety risks. We agree with this conclusion.

104. The pipeline facilities will comply with DOT safety regulations stated at 49 C.F.R. Part 192. These regulations specify material selection, design criteria, corrosion protection, and qualifications for welders and operation personnel. Additionally, Creole Trail will comply with the Commission's environmental regulations at 18 C.F.R. § 380.15, regarding the siting and maintenance of pipeline right-of-ways.

15. EA vs. EIS

105. The Sierra Club asserts that an EIS rather than an EA should be prepared for the projects. The Commission's regulations state that "if the Commission believes that a proposed action … may not be a major federal action significantly affecting the quality of the human environment, an EA, rather than an EIS, will be prepared first. Depending on the outcome of the EA, an EIS may or may not be prepared."[125]

106. The EA addresses this comment in section 1.4.[126] The EA concludes that an EA is warranted to support a finding of no significant impact because the Liquefaction Expansion Project will be adjacent to the existing Sabine Pass LNG Terminal within the existing leased 853-acre terminal site, the pipeline project will be co-located to the extent practicable for the majority of the route, and the impacts associated with these projects can be sufficiently mitigated. The EA adequately explains that an EIS is not warranted in this proceeding.

16. Programmatic EIS

107. The Sierra Club comments that a programmatic EIS that considers the cumulative impacts of all LNG export terminals that are pending or approved by the DOE should be developed. EA section 1.4 addresses this comment.[127] The EA points out that the cumulative impacts of construction and operation of other proposed LNG export projects in the vicinity of the project have been considered in the EA's environmental analysis and are acceptable.[128] The Commission's practice is to consider each LNG export project application on its own merits. As noted in *Cameron LNG*, there is no

[125] 18 C.F.R. § 380.6(b) (2014).

[126] EA at 5.

[127] *Id.* at 6.

[128] *Id.* at 161-165 (Table 2.9-1).

Commission or multi-agency "program" for considering the environmental impacts of a group of LNG export projects.[129] The proposal for the Liquefaction Expansion Project is not in response to "broad Federal actions such as the adoption of new agency programs or regulations" that might require preparation of a programmatic EIS.[130]

17. Segmentation

108. Sierra Club contends that the Commission "unlawfully segmented" its environmental review of three interrelated Sabine Pass LNG amendments that impact the Liquefaction Project – proposed Trains 5 and 6 proposed in this application, the approved Modification Project that accelerated construction of Trains 1-4 in Stages 1 and 2,[131] and the approved authorized increase in production capacity of Trains 1-4 based on design changes.[132] The Commission rejected Sierra Club's similar segmentation argument with respect to the Modification Project and the Liquefaction Project, finding that the review of those projects in separate environmental documents constituted an appropriate tiering[133] of our analyzes and did not amount to unlawful segmentation.[134] The application for proposed Trains 5 and 6 presents a similar situation, in that the proposal for Trains 5 and 6 was not ripe for consideration with the applications for the earlier projects. CEQ regulations allow an agency to tier its environmental analysis to allow the "lead agency to focus on the issues which are ripe for decision and to exclude from consideration issues already decided or not yet ripe."[135]

109. When assessing a proposed project's scope under NEPA, an agency must examine both connected and cumulative actions, and may examine similar actions.[136] An agency

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[129] *Cameron LNG, LLC*, 147 FERC ¶ 61,230, at PP 70-72 (2014).

[130] 40 C.F.R. § 1502.4(b) (2014).

[131] *Sabine Liquefaction, LLC*, 144 FERC ¶ 61,099 (2013) (application filed October 9, 2012).

[132] *Sabine Liquefaction, LLC*, 146 FERC ¶ 61,117 (2014) (application filed October 25, 2013).

[133] 40 C.F.R. § 1502.20 (2014).

[134] 144 FERC ¶ 61,099 at PP 27-37.

[135] 40 C.F.R. § 1508.28(b) (2014).

[136] 40 C.F.R. § 1508.25(a) (2014).

impermissibly "segments" NEPA review when it divides these federal actions "into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration."[137] Only by comprehensively considering "pending proposals can the agency evaluate different courses of action."[138]

110. Actions are "connected" if they: "[a]utomatically trigger other actions which may require environmental impact statements;" "[c]annot or will not proceed unless other actions are taken previously or simultaneously;" or "[a]re interdependent parts of a larger action and depend on the larger action for their justification."[139] Actions are not "connected" if they have "independent utility"[140] or if other actions have yet to be proposed.[141] A proposal occurs when: (1) agency action subject to NEPA has a goal; (2) the agency is actively preparing to make a decision on one or more alternative means of accomplishing that goal; and (3) the effects can be meaningfully evaluated.[142] A proposal may exist in fact as well as by agency declaration that one exists.[143]

111. Actions are "cumulative" if they, when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.[144] Similar to connected actions, cumulative actions must be proposed.[145]

112. In evaluating whether actions are improperly segmented courts typically employ an "independent utility" test, which "asks whether each project would have taken place in

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[137] *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014).

[138] *Id. (quoting Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976)).

[139] 40 C.F.R. § 1508.25(a)(1)(i)-(iii) (2014).

[140] *See Town of Huntington v. Marsh*, 859 F.2d 1134, 1142 (2d Cir. 1988); *Hudson River Sloop Clearwater, Inc. v. Dep't of Navy*, 836 F.2d 760, 764 (2d Cir. 1988); *Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294, 298 (D.C. Cir. 1987).

[141] Connected actions must be "proposed." *Delaware Riverkeeper Network*, 753 F.3d at 1317 (citing *Weinberger v. Catholic Action of Haw.*, 454 U.S. 139, 146 (1981)).

[142] 40 C.F.R. § 1508.23 (2014).

[143] *Id.*

[144] 40 C.F.R. § 1508.25(a)(2).

[145] *Id.*

the other's absence. If so, they have independent utility and are not considered connected actions."[146] The earlier projects have utility completely independent of Trains 5 and 6 of the Liquefaction Expansion Project. The projects serve different shippers; the market for the Liquefaction Expansion Project did not develop until processing of those projects was well under way.[147]

113. In addition, the Liquefaction Expansion Project had not been proposed at the time the Commission was considering the Modification Project. The application for authority to construct Trains 5 and 6 was not filed with the Commission until September 30, 2013. While our order approving the Modification Project recognized that Sabine Pass had requested pre-filing for Trains 5 and 6,[148] the Modification Project EA and the order approving it could not environmentally evaluate Trains 5 and 6 because Sabine Pass did not file its application until September 30, 2013, five months after issuance of the Modification Project EA.[149] The Commission does not undertake a detailed environmental review of projects in the pre-filing stage because the pre-filing concept may not mature into an application.

114. Sabine Pass's applications were driven by market demand for liquefaction services, and the Commission processed each in turn in accordance with its standard procedures. It is unrealistic to expect Sabine Pass to have deferred requesting approval of its earlier projects until they could be packaged in a consolidated application with a possible future amendment for Trains 5 and 6.

115. The Commission has conducted a comprehensive environmental review of the entire Liquefaction Project, as amended. Our NEPA review includes the environmental impacts of LNG Trains 1-4, the Modification Project, and proposed Trains 5 and 6.

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[146] *See, e.g.*, *Delaware Riverkeeper*, 753 F.3d at 1316-17 (assessing independent utility as one of four factors articulated in *Taxpayers Watchdog v. Stanley*, 819 F.2d 294 (D.C. Cir. 1987)); *Webster v. U.S. Dep't of Agric.* 685 F.3d 411, 426 (4th Cir. 2012); *Wilderness Workshop*, 531 F.3d 1220, 229 (10th Cir. 2008); *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006).

[147] Indeed, Sabine Pass is still negotiating for the sale of LNG from Train 6.

[148] *Sabine Pass Liquefaction, LLC*, 144 FERC ¶ 61,099, at n.7 (2013). On February 27, 2013, Sabine Pass and Cheniere Creole Trail Pipeline filed a letter requesting the Commission to initiate pre-filing review for the construction of Trains 5 and 6 and pipeline looping and extension facilities.

[149] The amendment to increase the authorized production capacity of the Liquefaction Project did not involve the construction or modification of any facilities.

Thus, our NEPA review of Trains 5 and 6 consists of a snapshot of the entire Liquefaction Project with LNG Trains 1-6 operating at the same time at full design capacity.[150] Sierra Club's implication that our environmental review only looks at impacts from Trains 5 and 6 does not conform to our practice to look at the entire Liquefaction Project. The EA in this proceeding did not segment proposed Trains 5 and 6 from the Liquefaction Project as a pretext to minimize our environmental review.[151]

18. Alternatives

116. Sierra Club contends that CEQ regulations require the Commission to "include reasonable alternatives not within the jurisdiction of the lead agency."[152] These suggested alternatives include denying exports as contrary to the public interest; limiting exports to smaller quantities of LNG on a slower timetable; siting the export terminal at a different location; precluding use of gas from "particular plays, formations, or regions" or "poorly regulated unconventional gas production" and requiring exporters' certification of compliance with best production practices; U.S. utility market and fuel choice (coal use) effects; and designing, constructing, and operating export facilities to minimize environmental impacts.

117. The EA in this proceeding identifies Sierra Club's proposed alternatives.[153] The Commission's order on rehearing of the 2012 Order also addressed Sierra Club's same proposed alternatives and observed that many involved broad, nation-wide policy proposals not before the Commission.[154] It is the DOE Secretary's delegated prerogative, not the Commission's, to grant, deny, or condition, as appropriate, exports of the

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[150] In practice, each train operates independently of one another and, each operates as required, to meet contractual requirements for LNG production.

[151] As noted in our order approving the Modification Project, *Sabine Pass Liquefaction, LLC*, 144 FERC ¶ 61,099, at P 32 (2013):

> there is no indication in the record that Sabine Pass intentionally downsized its Liquefaction Project or concealed information from the Commission to avoid a more comprehensive NEPA review. We also see no subterfuge in Sabine Pass's timing for filing its Modification Project and, hence, no violation of NEPA occurred.

[152] 40 C.F.R. § 1502.14(c) (2014).

[153] EA at 171-81.

[154] *Sabine Pass Liquefaction, LLC*, 140 FERC ¶ 61,076, at PP 28, 31-32 (2012).

commodity natural gas, and there is no proposal to change that role. The states, not the Commission, have jurisdiction over the gathering and production of natural gas and relevant information about wells permits, actual construction of wells, and well production is within the purview of the states and is not part of the record in this proceeding.

118. The Commission has already addressed Sierra Club's proposed alternatives that are within the Commission's jurisdiction. Specifically, the site of the export facility has previously been environmentally reviewed and found in the 2012 Order to be acceptable for exports. The Commission's environmental review of the Liquefaction Expansion Project is intended to minimize the project's environmental effects by requiring optimal design, construction, and operational conditions.

19. Electric Driven Turbines

119. The Sierra Club believes that the EA's analysis of electric-motor driven turbines to drive the liquefaction compressors is inadequate.[155] The Sierra Club argues that other facilities in the world currently employ this technology and the Freeport LNG Liquefaction Project proposes this technology. The Sierra Club also states that the EA fails to consider the mixed scenario of gas-driven turbines for the ethylene refrigeration turbines (which have waste heat recovery units proposed) and using electric-driven turbines for all other liquefaction turbines. The Sierra Club agrees with the EA that air emission reductions would be offset by additional emissions at the electric generating facility. However, it believes that the EA should compare the emission scenarios.

120. We disagree. The EA acknowledges the use of this technology at other facilities, but notes that the reliability necessary to sustain base load LNG production has not been demonstrated such that the technology can be recommended over the proposed design. The EA also states that the Sabine Pass Liquefaction facility is not in a nonattainment area like the Freeport LNG facility, and therefore, was not required to meet more restrictive air permitting requirements. A mixed-run liquefaction train (part electric-driven and part gas-driven) would still require variable frequency drive systems and water cooling, which would further complicate an already complex design. These factors present sufficient rationale to conclude that any amount of electric-motor driven compression is not environmentally preferable.

121. However, the electric-driven alternatives analysis in the EA also identified numerous other reasons why this alternative would not be preferable to the proposed gas-driven units. The Sierra Club fails to consider one of the EA's most compelling findings, i.e., that this alternative would require the need to construct a minimum

[155] EA at 176-77.

65-mile-long electrical power line with an associated right-of-way and the associated impacts on people, wildlife, vegetation, and the Sabine National Wildlife Refuge. A more in-depth comparison of air quality emissions would not help to inform the Commission's decision, when multiple other factors preclude further consideration. The EA includes air quality modeling demonstrating compliance with all applicable air quality modeling standards. Therefore, the potential for air emission reductions (which, regardless of the amount, are not necessary to meet applicable air quality standards) does not outweigh the many environmental and design challenges for this alternative.

122. Based on the analysis in the EA, we conclude that if constructed and operated in accordance with Sabine Pass's and Creole Trail's application and supplements, and in compliance with the environmental conditions in the appendix to this order, our approval of these proposals would not constitute a major federal action significantly affecting the quality of the human environment.

123. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.[156]

V. Conclusion

124. The Commission, on its own motion, received and made part of the record in these proceedings all evidence, including the application and exhibits thereto, and all comments submitted herein, and upon consideration of the record,

The Commission orders:

(A) In Docket No. CP13-552-000, Sabine Pass is authorized under section 3 of the NGA to site, construct, and operate its proposed Liquefaction Expansion Project as described and conditioned herein, and as fully described in Sabine Pass's application and supplements, subject to the environmental conditions in the Appendix to this order.

(B) Sabine Pass's proposed Liquefaction Expansion Project must be completed and in-service within five years of the date of this order.

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[156] *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Commission*, 894 F.2d 571 (2d Cir. 1990); and *Iroquois Gas Transmission System, L.P.*, et al., 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

(C) In Docket No. CP13-553-000, a certificate of public convenience and necessity under section 7(c) of the NGA is issued to Creole Trail authorizing it to construct and operate its proposed Creole Trail Expansion Project, as described and conditioned herein, and as more fully described in its application and supplements.

(D) The certificate authorized in Ordering Paragraph (C) above is conditioned on:

(1) Creole Trail's completing and placing in-service its expansion project within five years of the date of this order;

(2) Creole Trail's compliance with all applicable Commission regulations under the NGA, particularly Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the regulations; and

(3) Creole Trail's compliance with the environmental conditions in the Appendix to this order.

(E) Creole Trail's use of its existing Rate Schedules FTS and ITS rates as initial rates for Zone 1 expansion service is approved. Creole Trail must file workpapers not less than 30 days, or more than 60 days before the in-service date, supporting the recovery of fuel and lost and unaccounted for gas associated with the Creole Trail Expansion Project in Zone 1.

(F) Creole Trail's request for a predetermination of rolled-in rate treatment for costs of facilities in Zone 1 associated with the Creole Trail Expansion Project is denied.

(G) For Zone 1, Creole Trail must file workpapers not less than 30 days, or more than 60 days before the in-service date, supporting the recovery of fuel and lost and unaccounted for gas associated with the Creole Trail Expansion Project in Zone 1.

(H) For Zone 2, Creole Trail, in the filing required by Ordering Paragraph (J), must either provide for a 100-percent credit of the interruptible revenues, net of variable costs, to maximum rate firm and interruptible customers or an allocation of costs and volumes to these services. Creole Trail's proposed initial fuel retention percentage of 0.70 is approved.

(I) Creole Trail shall keep separate books and accounting costs attributable to the proposed services, as more fully described above.

(J) Creole Trail shall file actual tariff records reflecting the rates and fuel retainage percentages as set forth in this order not less than 30 days, or more than 60 days, before the date Creole Trail's Zone 1 and Zone 2 expansion facilities go into service.

(K) Creole Trail must revise its AFUDC procedures, as discussed in the body of this order.

(L) Sabine Pass and Creole Trail shall notify the Commission's environmental staff by telephone, e-mail, and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Sabine Pass or Creole Trail. Sabine Pass and Creole Trail shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Appendix

Environmental Conditions

This authorization includes the following conditions:

1. Sabine Pass and Creole Trail shall follow the construction procedures and mitigation measures described in their application and supplements, including responses to staff data requests and as identified in the EA, unless modified by this Order. Sabine Pass and Creole Trail must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
    b. justify each modification relative to site-specific conditions;
    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
    d. receive approval in writing from the Director of the Office of Energy Projects (OEP) before using that modification.

2. For LNG facilities, the Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and the environment during Sabine Pass Liquefaction Expansion Project construction and operation. This authority shall allow:

    a. stop-work authority and authority to cease operation; and
    b. the design and implementation of any additional measures deemed necessary to ensure compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from Sabine Pass Liquefaction Expansion Project construction and operation.

3. **Prior to any construction**, Sabine Pass and Creole Trail shall file affirmative statements with the Secretary, certified by senior company officials, that all company personnel, environmental inspectors (EIs), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Sabine Pass and Creole Trail shall file with the Secretary any revised detailed survey alignment maps or sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by this Order. All

requests for modifications of environmental conditions of this Order or site-specific clearances must be written and must specify locations designated on these alignment maps or sheets.

Creole Trail's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to this Order must be consistent with these authorized facilities and locations. Creole Trail's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Sabine Pass and Creole Trail shall file with the Secretary detailed alignment maps or sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed that have not been previously identified in filings with the Secretary. Approval for use of each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use or cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps, sheets, or aerial photographs. Use of each area must be approved in writing by the Director of OEP **before construction in or near that area**.

   This requirement does not apply to route variations required herein or extra workspace allowed by FERC's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands. Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;
   b. implementation of endangered, threatened, or special concern species mitigation measures;
   c. recommendations by state regulatory authorities; and
   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the Authorization and Certificate and before construction begins**, Sabine Pass and Creole Trail shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP. Sabine Pass and Creole Trail must file revisions to the plan as schedules change. The plan shall identify:

a. how Sabine Pass and Creole Trail will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by this Order;
b. how Sabine Pass and Creole Trail will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
c. the number of EIs assigned per spread and aboveground facility sites and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
d. company personnel, including EIs and contractors, who will receive copies of the appropriate materials;
e. the location and dates of the environmental compliance training and instructions Sabine Pass and Creole Trail will give to all personnel involved with construction and restoration (initial and refresher training as the Projects progress and personnel change) with the opportunity for OEP staff to participate in the training session(s);
f. the company personnel (if known) and specific portion of Sabine Pass' and Creole Trail's organization having responsibility for compliance;
g. the procedures (including use of contract penalties) Sabine Pass and Creole Trail will follow if noncompliance occurs; and
h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
    (i) the completion of all required surveys and reports;
    (ii) the environmental compliance training of onsite personnel;
    (iii) the start of construction; and
    (iv) the start and completion of restoration.

7. Beginning with the filing of its Implementation Plans, Sabine Pass shall file updated status reports on a **monthly** basis for the Sabine Pass Liquefaction Expansion Project and Creole Trail shall file updated status reports, prepared by the head EI, with the Secretary on a **weekly** basis for the Creole Trail Expansion Project until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

    a. an update on Sabine Pass' and Creole Trail's efforts to obtain the necessary federal authorizations;

b. the current construction status at the terminal site and of each spread of the pipeline, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
c. a list of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions or permit requirements imposed by other federal, state, or local agencies);
d. description of the corrective actions implemented in response to all instances of noncompliance and their cost;
e. the effectiveness of all corrective actions implemented;
f. a description of any landowner or resident complaints that may relate to compliance with the requirements of this Order and the measures taken to satisfy their concerns; and
g. copies of any correspondence received by Sabine Pass and Creole Trail from other federal, state, or local permitting agencies concerning instances of noncompliance and Sabine Pass and Creole Trail's response.

8. **Prior to receiving written authorization from the Director of OEP to commence construction of any respective project facilities**, Sabine Pass and Creole Trail shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

9. Sabine Pass must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the Liquefaction Expansion Project facilities**. Instrumentation and controls, hazard detection, hazard control, and security components/systems necessary for the safe introduction of such fluids shall be installed and functional.

10. Sabine Pass and Creole Trail must receive written authorization from the Director of OEP **before placing the respective Projects into service**. Such authorization will only be granted following a determination that facilities have been constructed in accordance with FERC approval and applicable standards, can be expected to operate safely as designed, and the rehabilitation and restoration of the areas affected by the Project are proceeding satisfactorily.

11. **Within 30 days of placing the authorized facilities in service**, Sabine Pass and Creole Trail shall file an affirmative statement with the Secretary, certified by a senior company official:

a. that the facilities have been constructed or installed in compliance with all applicable conditions and that continuing activities will be consistent with all applicable conditions; or
b. identifying which of the certificate conditions Sabine Pass and Creole Trail has complied with or will comply with. This statement shall also identify any areas affected by the respective Projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

12. Sabine Pass shall employ at least one EI for the Sabine Pass Liquefaction Expansion Project and Creole Trail shall employ at least one EI per construction spread. Each EI shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by this Order and other grants, permits, certificates, or other authorizing documents;
b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
c. empowered to order correction of acts that violate the environmental conditions of this Order and any other authorizing document;
d. a full-time position, separate from all other activity inspectors;
e. responsible for documenting compliance with the environmental conditions of this Order as well as any environmental conditions or permit requirements imposed by other federal, state, or local agencies; and
f. responsible for maintaining status reports.

13. Sabine Pass shall file the following information, stamped and sealed by the professional engineer-of-record, with the Secretary:

a. **prior to site preparation**: site preparation design drawings, specifications, and quality control procedures that will be used for design and construction; and
b. **prior to their construction**: structure and foundation design drawings and calculations of the liquefaction facilities.

In addition, Sabine Pass shall file, in its Implementation Plan, the schedule for producing this information.

14. **Prior to beginning construction at the Sabine Pass Liquefaction Expansion Terminal**, Sabine Pass shall file with the Secretary the Corps of Engineer-approved wetland mitigation plan and associated correspondence.

15. **Prior to beginning construction of the Expansion between MPs 99 and 100.42**, Creole Trail shall file with the Secretary documentation of approval from the mitigation bank owners and the Corps of Engineers authorizing crossing of the Clear Creek Mitigation Bank and Calcasieu Mitigation Bank.

16. **Prior to beginning construction of the pipelines**, Creole Trail shall file with the Secretary a Corps of Engineers-approved wetland mitigation plan and associated correspondence.

17. **Prior to beginning construction**, Creole Trail shall file with the Secretary documentation of its consultation with the FWS regarding project impacts on migratory birds for review and approval by the Director of the OEP.

18. **Prior to beginning construction on the Extension**, Creole Trail shall consult with the FWS to determine if surveys for the American chaffseed are necessary for the segment between MPs 96.07 and 96.77, and file the results of that consultation with the Secretary.

19. Creole Trail shall **not begin** construction of facilities and/or use staging, storage, or temporary work areas and new or to-be-improved access roads until:

    a. Creole Trail files supplemental survey reports for areas where access was not previously granted, any realignments or reroutes, extra work spaces, access roads, contractor yards, or other areas requiring survey, and the Louisiana SHPO's comments on the reports;
    b. the Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and
    c. the Director of OEP reviews and approves all reports and plans and notifies Creole Trail in writing that it may proceed with any treatment or construction.

    All material filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: **"CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE."**

20. **Prior to beginning construction**, Sabine Pass shall file with the Secretary a statement verifying it will adopt its approved (in Docket No. CP11-72) Fugitive Dust Control Plan for use on the Sabine Pass Liquefaction Expansion Project and identify any modification or additional measures needed for the Sabine Pass Liquefaction Expansion Project. Any revised measures or modification to the approved plan shall also be filed with the Secretary, for review and written approval by the Director of OEP.

21. Creole Trail shall perform all horizontal directional drill (HDD) activities, with the exception of the pull-back, during daytime hours. If 24-hour operations are required at any location, Creole Trail shall file with the Secretary for review and written approval by the Director of OEP an HDD noise analysis and mitigation plan prior to beginning the 24-hour HDD construction. The plan shall include:

    a. the distance and direction to each noise sensitive area (NSA) within 0.5 mile of the 24-hour HDD entry and exit site and the proposed length of time HDD activities would occur;
    b. the background noise levels and the estimated drilling noise contributions at the NSAs using a day-night equivalent sound level (Ldn);
    c. the noise mitigation measures Creole Trail would commit to implement at each entry or exit site where estimated drilling noise contribution would exceed 55 decibels on the A-weighted scale (dBA) Ldn at a nearby NSA, and the resulting noise levels with the mitigations measures; and
    d. site-specific plans identifying any noise walls or barriers, equipment locations, equipment barriers, or any other noise mitigation measures.

22. Sabine Pass shall file a full load noise survey of the Sabine Pass LNG Terminal with the Secretary **no later than 60 days** after placing each liquefaction train (5 and 6) in service. If a full load condition noise survey is not possible, Sabine Pass shall provide an interim survey at the maximum possible operation **within 60 days** of placing each liquefaction train in service and file the full load operational survey **within 6 months**. If the noise attributable to operation of all of the equipment at the Sabine Pass LNG Terminal, including the liquefaction facilities, under interim or full load conditions, exceeds an Ldn of 55 dBA at any nearby NSA, Sabine Pass shall file a report on the changes that are needed and shall install the additional noise controls to meet the level within one year of the in-service date. Sabine Pass shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs additional noise controls.

23. Creole Trail shall file a noise survey with the Secretary **no later than 60 days** after placing the Mamou Compressor Station into service. If a full load condition noise survey is not possible, Creole Trail shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at the compressor station, under interim or full horsepower load conditions, exceeds an Ldn of 55 dBA at any nearby NSAs, Creole Trail shall file a report on those changes needed and should install the additional noise controls to meet the level **within 1 year** of the in-service date. Creole Trail shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

24. **Prior to construction of the final design**, Sabine Pass shall file information/revisions with the Secretary, for review and written approval by the Director of the OEP, pertaining to Sabine Pass' response numbers 6, 9, 10, and 12 of its February 12, 2014 filing, which indicated features to be included or considered in the final design and documentation.

25. **Prior to construction of the final design**, Sabine Pass shall file with the Secretary for review and written approval by the Director of OEP, certification that the process design for trains 5 and 6 would duplicate trains 1 through 4, and the conditions from the April 16, 2012 and August 2, 2013 Orders (Docket Numbers CP11-72-000 and CP13-2-000, respectively) will be incorporated in the design for trains 5 and 6.

Recommendations 26 through 61 shall apply to the Sabine Pass Liquefaction Expansion Project. Information pertaining to these specific recommendations shall be filed with the Secretary for review and written approval by the Director of OEP either: **prior to initial site preparation; prior to construction of final design; prior to commissioning; prior to introduction of hazardous fluids; or prior to commencement of service**, as indicated by each specific condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 683 (Docket No. RM06-24-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 CFR 388.112 (see *Critical Energy Infrastructure Information*, Order No. 683, 71 Fed. Reg. 58,273 (October 3, 2006), FERC Stats. & Regs. ¶ 31,228 [2006]). Information pertaining to items such as off-site emergency response; procedures for public notification and evacuation; and construction and operating reporting requirements will be subject to public disclosure. All information shall be filed a minimum of 30 days before approval to proceed is requested.

26. **Prior to initial site preparation**, Sabine Pass shall provide quality assurance and quality control procedures for construction activities.

27. **Prior to initial site preparation**, Sabine Pass shall file an overall project schedule that includes the proposed stages of the commissioning plan.

28. **Prior to initial site preparation**, Sabine Pass shall provide procedures for controlling access during construction.

29. **Prior to initial site preparation**, Sabine Pass shall provide a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.

30. **Prior to initial site preparation**, Sabine Pass shall file certification that DOT has found the Exclusion Zone Agreement and Declaration of Restrictive Covenants satisfactory for compliance with 49 CFR 193.2059. Sabine Pass shall consult with DOT on any actions necessary to demonstrate compliance with Part 193.

31. **Prior to initial site preparation**, Sabine Pass shall file an updated Emergency Response Plan (ERP) which addresses on-site and off-site emergency response for the Sabine Pass Liquefaction Expansion Project facilities. The ERP shall include evidence of consultation and coordination with all incident response organizations or personnel responsible for emergency response. Information pertaining to items such as off-site emergency response and procedures for public notification and evacuation would be subject to public disclosure.

32. **Prior to initial site preparation**, Sabine Pass shall file 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 shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base.

33. The **final design** shall include certification that the final design is consistent with the information provided DOT as described in the design spill determination letter dated April 11, 2014 (Accession Number 20140415-4004). In the event that any modifications to the design alters the candidate design spills on which the Title 49 CFR Part 193 siting analysis was based, Sabine Pass shall consult with DOT on any actions necessary to comply with Part 193.

34. The **final design** shall include change logs that list and explain any changes made from the front-end engineering design provided in the Sabine Pass Liquefaction Expansion Project application and filings. A list of all changes with an explanation for the design alteration shall be provided and all changes shall be clearly indicated on all diagrams and drawings.

35. The **final design** shall provide an up-to-date complete equipment list, process and mechanical data sheets, and specifications.

36. The **final design** shall provide up-to-date process flow diagrams with heat and material balances and piping and instrumentation diagrams (P&IDs), which include the following information:

    a. equipment tag number, name, size, duty, capacity, and design conditions;
    b. equipment insulation type and thickness;

c. storage tank pipe penetration size or nozzle schedule;
d. piping with line number, piping class specification, size, and insulation type and thickness;
e. piping specification breaks and insulation limits;
f. all control and manual valves numbered;
g. valve high pressure sides and cryogenic ball valve external and internal vent locations;
h. relief valves with set points; and
i. drawing revision number and date.

37. The **final design** shall include a list of all car-sealed and locked valves consistent with the P&IDs.

38. The **final design** shall provide P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect the SPLE Project facilities to the existing facility.

39. The **final design** shall include a hazard and operability review of the completed design prior to issuing the P&IDs for construction. A copy of the review, a list of the recommendations, and actions taken on the recommendations shall be filed.

40. The **final design** shall include spill containment system drawings with dimensions and slopes of curbing, trenches, and impoundments.

41. The **final design** shall include electrical area classification drawings for the condensate storage and send-out area.

42. The **final design** shall specify that for hazardous fluids, stainless steel and carbon steel branch piping and piping nipples are consistent with the existing facility's specifications.

43. The **final design** shall include a plan for clean-out, dry-out, purging, and tightness testing. This plan shall address the requirements of the American Gas Association's Purging Principles and Practice required by 49 CFR 193 and shall provide justification if not using an inert or non-flammable gas for cleanout, dry-out, purging, and tightness testing.

44. The **final design** shall include the cause-and-effect matrices for the process instrumentation, fire and gas detection system, and emergency shutdown system. The cause-and-effect matrices shall include alarms and shutdown functions, details of the voting and shutdown logic, and setpoints.

45. The **final design** shall include a drawing showing the location of the emergency shutdown (ESD) buttons. ESD buttons shall be easily accessible, conspicuously labeled and located in an area which would be accessible during an emergency.

46. The **final design** shall include an updated fire protection evaluation of the proposed facilities carried out in accordance with the requirements of National Fire Protection Association (NFPA) 59A 2001, chapter 9.1.2 as required by 49 CFR 193. A copy of the evaluation, a list of recommendations, supporting justifications, and actions taken on the recommendations shall be filed.

47. The **final design** of the hazard detectors shall account for the calibration gas when determining the lower flammability limit set points for methane, propane, and ethylene, and condensate.

48. The **final design** shall include complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment. The list shall include the instrument tag number, type and location, alarm indication locations, and shutdown functions of the proposed hazard detection equipment.

49. The **final design** shall provide a technical review of its proposed facility design that:

    a. identifies all combustion/ventilation air intake equipment and the distances to any possible hazardous fluid release (LNG, flammable refrigerants, flammable liquids and flammable gases); and
    b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices would isolate or shutdown any combustion equipment whose continued operation could add to or sustain an emergency.

50. The **final design** shall provide complete plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Drawings shall clearly show the location by tag number of all fixed, wheeled, and hand-held extinguishers. The list shall include the equipment tag number, type, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units.

51. The **final design** shall include facility plans and drawings showing the proposed location of the firewater and any foam systems. Drawings shall clearly show firewater and any foam piping; post indicator valves; and the location of, and area covered by, each monitor, hydrant, water curtain, deluge system, foam system,

water mist system, and sprinkler. The drawings shall also include piping and instrumentation diagrams of the firewater and foam systems.

52. **Prior to commissioning**, Sabine Pass shall file plans and detailed procedures for testing the integrity of on-site mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service.

53. **Prior to commissioning**, Sabine Pass shall provide a detailed schedule for commissioning through equipment startup. The schedule shall include milestones for all procedures and tests to be completed prior to introduction of hazardous fluids and during commissioning and startup. Sabine Pass shall file documentation certifying that each of these milestones has been completed before authorization to begin the next phase of commissioning and startup would be issued.

54. **Prior to commissioning**, Sabine Pass shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.

55. **Prior to commissioning**, Sabine Pass shall file Operation and Maintenance procedures and manuals which include safety procedures, hot work procedure and permits, abnormal operating conditions reporting procedures, and management of change procedures and forms.

56. **Prior to commissioning**, Sabine Pass shall maintain a detailed training log to demonstrate that operating staff has completed the required training.

57. **Prior to commissioning**, Sabine Pass shall file a tabulated list and drawings of the proposed hand-held fire extinguishers. The list shall include the equipment tag number, extinguishing agent type, capacity, number, and location. The drawings shall show the extinguishing agent type, capacity, and tag number of all hand-held fire extinguishers.

58. **Prior to introduction of hazardous fluids**, Sabine Pass shall complete all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the Distributed Control System and Safety Instrumented System that demonstrates full functionality and operability of the system.

59. **Prior to introduction of hazardous fluids**, Sabine Pass shall complete a firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant shall be shown on facility plot plan(s).

60. **Prior to commencement of service**, Sabine Pass shall label piping with fluid service and direction of flow in the field in addition to the pipe labeling requirements of NFPA 59A.

61. **Prior to commencement of service**, progress on the construction of the proposed systems in shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, problems encountered, contractor non-conformance/deficiency logs, remedial actions taken, and current project schedule. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.

In addition, recommendations 62 through 64 shall apply throughout the life of the facility.

62. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least an **annual basis** or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, Sabine Pass shall respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed piping and instrumentation diagrams reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted annual report, shall be submitted.

63. Semi-annual operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions, abnormal operating experiences, activities (including ship arrivals/departures, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil-off/flash gas, etc.), and plant modifications including future plans and progress thereof. Abnormalities shall include but are not limited to unloading/loading shipping problems, potential hazardous conditions caused by off-site vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, nonscheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluid releases, fires involving hazardous fluid, negative pressure (vacuum) within a storage tank and higher than predicted boiloff rates. Adverse weather conditions and the effect on the facility shall also be reported. Reports shall be submitted **within 45 days after each period ending June 30 and December 31**. In addition to the above items, a section entitled “Significant Plant Modifications Proposed for the Next 12 Months (dates)” shall also be included in

the semi-annual operational reports. Such information would provide the FERC staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

64. Significant non-scheduled events, including safety-related incidents (e.g., hazardous fluid releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (i.e., attempts to enter site, suspicious activities) shall be reported to FERC staff. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to FERC staff **within 24 hours**. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable hazardous fluids related incidents include:

a. fire;
b. explosion;
c. estimated property damage of $50,000 or more;
d. death or personal injury necessitating in-patient hospitalization;
e. release of hazardous fluid for five minutes or more;
f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;
g. any crack or other material defect that impairs the structural integrity or reliability of an facility that contains, controls, or processes a hazardous fluid;
h. any malfunction or operating error that causes the pressure of a pipeline or facility that contains or processes a hazardous fluid to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure limiting or control devices;
i. a leak in a facility that contains or processes a hazardous fluid that constitutes an emergency;
j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;
k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operation of a pipeline or a facility that contains or processes a hazardous fluid;
l. safety-related incidents with hazardous material transportation occurring at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property or the environment, including authority to direct the LNG facility to cease operations. Following the initial company notification, FERC staff would determine the need for a separate follow-up report or follow-up in the upcoming semi-annual operational report. All company follow-up reports shall include investigations results and recommendations to minimize a reoccurrence of the incident.

65. Sabine Pass and Creole Trail shall contact the EPA about the need for additional sole-source aquifer consultation pursuant to the Safe Drinking Water Act. Sabine Pass and Creole Trail shall file the results of such consultation and any related documents with the Secretary **prior to construction**.