

155 FERC ¶ 61,219
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Elba Liquefaction Company, L.L.C.
Southern LNG Company, L.L.C.
Elba Express Company, L.L.C.

Docket Nos. CP14-103-000
CP14-115-000

ORDER GRANTING SECTION 3 AND SECTION 7 AUTHORIZATIONS

(Issued June 1, 2016)

1. On March 10, 2014, in Docket No. CP14-103-000, Elba Liquefaction Company, L.L.C. (ELC) and Southern LNG Company, L.L.C. (Southern LNG), filed a joint application under section 3 of the Natural Gas Act (NGA)¹ and Part 153 of the Commission's regulations² requesting authorization to construct and operate new natural gas liquefaction and export facilities at Southern LNG's existing liquefied natural gas (LNG) terminal located on Elba Island, Chatham County, Georgia (Elba Liquefaction Project). Additionally, pursuant to section 7(b) of the NGA³ and Part 157 of the Commission's regulations,⁴ Southern LNG requests authorization to abandon its LNG Truck Loading Facilities at the terminal.
2. On March 21, 2014, in Docket No. CP14-115-000, Elba Express Company, L.L.C. (Elba Express) filed an application under section 7(c) of the NGA⁵ to add north-to-south

¹ 15 U.S.C. § 717b (2012).

² 18 C.F.R. pt. 153 (2015).

³ 15 U.S.C. § 717f(b) (2012).

⁴ 18 C.F.R. pt. 157 (2015).

⁵ 15 U.S.C. § 717f(c) (2012).

transportation capacity to the existing Elba Express pipeline system by constructing and operating additional compression at the existing Hartwell Compressor Station in Hart County, Georgia, and constructing and operating two new compressor stations in Jefferson and Effingham Counties, Georgia (Elba Express Modification Project). Elba Express is proposing the Elba Express Modification Project in part to enable Elba Express to transport domestically-produced natural gas on a firm basis to the Elba Liquefaction Project.

3. For the reasons discussed below, we authorize ELC and Southern LNG to construct and operate the Elba Liquefaction Project and authorize Southern LNG to abandon its truck loading facilities at the terminal. We also authorize Elba Express's proposal to construct and operate the Elba Express Modification Project. The authorizations are subject to the conditions discussed below.⁶

I. Background

4. ELC is a Delaware limited liability company formed by two entities: (1) Southern Liquefaction Company, LLC, a Delaware limited liability company that is a unit of El Paso Partners, L.P., and (2) Shell US Gas & Power, LLC, a Delaware limited liability with two members, Southern Liquefaction Company, LLC and Shell US Gas & Power LLC, a Delaware limited liability company that is a subsidiary of Royal Dutch Shell plc. Southern LNG is a Delaware limited liability company and a unit of El Paso Pipeline Partners, LP.

5. Southern LNG operates an LNG import terminal on Elba Island in Chatham County, Georgia, five miles downstream from the city of Savannah, Georgia, on the Savannah River.⁷ Southern LNG commenced operations at the Elba Island terminal in 1978 and, by 1980, when market demand slowed, had received 55 LNG shipments. From 1980 to 1982, Southern LNG provided peak shaving service with the remaining inventory of imported LNG. Between 1982 and 2000, Southern LNG operated the terminal on a standby mode. In a series of orders from 1999 to 2001, the Commission authorized the re-commissioning and expansion of the Elba Island Facility (Elba I).⁸ In 2002 and 2003,

⁶ We are issuing this order concurrently with an Order Issuing Certificate in *Southern Natural Gas Company, LLC*, Docket No. CP14-493-000. As explained below, Southern's project is dependent on the Elba Express Modification Project.

⁷ Initial authorization for the Elba Island Facility was issued in *Southern Energy Co.*, 47 FPC 1624 (1972).

⁸ *Southern LNG, Inc.*, 89 FERC ¶ 61,314 (1999), *reh'g denied*, 90 FERC ¶ 61,257

(continued ...)

the Commission authorized a further expansion of the Elba Island terminal (Elba II).⁹ This expansion was placed into service on February 1, 2006. In 2007, the Commission authorized additional expansion facilities (Elba III Expansion) to expand the storage capacity of the terminal by 8.44 billion cubic feet (Bcf) and the vaporization capacity by 900 million cubic feet per day (MMcf/day) in two phases.¹⁰ Phase A of the Elba III Expansion included (1) modification of existing unloading docks; (2) construction of a new storage tank with 4.22 Bcf of storage capacity; and (3) installation of additional vaporization with a firm send-out capacity of 405 MMcf/day. After the Phase A facilities were placed in service, Southern LNG requested on August 2, 2011, that the Commission vacate the section 3 authorization Southern LNG received for the planned Phase B of the Elba III Expansion. On October 11, 2011, the Commission issued an order granting Southern LNG's request.

6. Southern LNG currently imports LNG for storage and revaporization using two LNG carrier berths, five LNG storage tanks, vaporization capacity, sendout facilities and other associated infrastructure. The terminal's current storage capacity is 11.5 Bcf, with 1,755 MMcf/day of peak vaporization and sendout capacity.

7. Elba Express is a Delaware limited liability company formed to provide open-access transportation in the States of Georgia and South Carolina. Elba Express owns and operates a 36-inch-diameter and 42-inch-diameter natural gas pipeline extending approximately 189 miles from Port Wentworth, Georgia, to interconnections with Transcontinental Gas Pipeline Company (Transco) in Hart County, Georgia, and Anderson County, South Carolina. Elba Express currently provides 945 MMcf/d of transportation capacity from the Elba Island LNG terminal to the Transco interconnections. In addition, as authorized in Docket No. CP12-11-000, Elba Express constructed the Hartwell Compressor Station in Hart County, Georgia, which permits the gas on the Elba Express pipeline to flow from north to south.

(2000); *Southern LNG, Inc.*, 94 FERC ¶ 61,188 (2001); *Southern LNG, Inc.*, 96 FERC ¶ 61,083 (2001).

⁹ *Southern LNG, Inc.*, 101 FERC ¶ 61,187 (2002), *order on reh'g*, 103 FERC ¶ 61,029 (2003).

¹⁰ *Southern LNG, Inc.*, 120 FERC ¶ 61,258 (2007), *order denying reh'g and granting reconsideration*, 122 FERC ¶ 61,137 (2008), *aff'd sub nom. Anderson v. FERC*, 333 F. Appx 575 (D.C. Cir. 2009).

8. Elba Express also owns an undivided interest in the Twin 30s Pipeline. The other owners of the Twin 30s Pipeline are Southern Natural Gas Company, L.L.C. (Southern), Magnolia Enterprise Holdings, Inc. (Magnolia), and Dominion Carolina Gas Transmission Corporation (Carolina Gas). Southern is the operator of the Twin 30s Pipeline. The Twin 30s Pipeline consists of two parallel 30-inch-diameter pipelines that were built by Southern to transport vaporized LNG from Elba Island to Port Wentworth, Georgia where the gas enters Southern's mainline system. Upon reactivation of the Elba Island Terminal in 2001, an undivided interest in the Twin 30s was sold to Carolina Gas to facilitate deliveries of gas from Elba Island to the Carolina Gas system. Subsequently, undivided interests in the Twin 30s Pipeline were sold to Elba Express in conjunction with the initial construction of the Elba Express Pipeline, so that Elba Express did not have to build a separate pipeline to interconnect with Elba Island, and to Magnolia, which leases its interest back to Southern such that Magnolia's interest is treated as though it is part of Southern's system.

II. Proposals

A. Elba Liquefaction Project (Docket No. CP14-103-000)

9. ELC and Southern LNG propose to add natural gas liquefaction capacity at Southern LNG's existing terminal site that would permit natural gas to be received by pipeline from a proposed interconnection with the Twin 30s Pipeline, and then be treated, liquefied and sent to Southern LNG's existing storage tanks. Southern LNG would then load the LNG onto LNG carriers berthed at Southern LNG's existing marine berth. No modifications are being proposed to Southern LNG's existing storage tanks and LNG docks. Modifications would be made to the existing terminal to include new or additional pumps, additional piping to the loading arms, and control systems to increase the loading rate to allow for export. Ultimately, Southern LNG's customers would export the LNG internationally via LNG carriers. Following completion of the Elba Liquefaction Project, Southern LNG would have the capacity to provide bi-directional service to allow its customers to either import or export LNG.

10. ELC and Southern LNG propose installation of the Elba Liquefaction Project in two phases. Phase I includes the installation of three Movable Modular Liquefaction System (MMLS) units that will create a total liquefaction capacity of approximately 0.75 million tonnes per annum (MTPA), and Phase II includes the installation of up to an additional seven MMLS units. Upon full completion of both phases, ELC would have the capability to liquefy a total of approximately 2.5 MTPA of LNG.

11. Construction of the proposed liquefaction facilities, to be owned by ELC, would include the installation of MMLS units and ancillary facilities to liquefy natural gas. Upon completion of construction, the proposed ELC liquefaction facilities would be operated by Southern LNG. The proposed Southern LNG export facilities, to be owned by Southern LNG, include the proposed facilities to be modified at the terminal to allow

Southern LNG to receive LNG from ELC at an interconnection to be installed with ELC, and to allow Southern LNG to load LNG onto LNG carriers berthed at Southern LNG's existing marine berth. The estimated cost of these facilities is approximately \$395,218,792.

12. In addition, Southern LNG proposes to abandon by removal its LNG truck loading facilities that were constructed when the terminal was initially authorized in 1972, but were not recommissioned at the time of the terminal's reactivation in 2001. Southern LNG's truck loading facilities include the existing scale house, truck scales, walkways, foundations, and ancillary equipment to fill trucks with LNG. Southern LNG proposes to remove the LNG truck loading facilities in conjunction with Phase I of the Elba Liquefaction Project.

13. On January 25, 2013, ELC and Shell NA LNG, LLC (Shell LNG) entered into a Liquefaction Service Agreement, whereby ELC would construct and own the ELC Liquefaction facilities for the receipt and liquefaction of natural gas and the delivery of LNG to Shell LNG. Also on January 25, 2013, Southern LNG and Shell LNG, an existing shipper of Southern LNG, entered into a Ship Loading Services Precedent Agreement, whereby following the completion of the Elba Liquefaction Project, Southern LNG proposes to provide additional firm services for the loading of LNG carriers for export. ELC will only have one customer, Shell LNG, and does not propose to provide open access liquefaction services or establish rates, terms or conditions of service that are regulated by the Commission.

14. Southern LNG proposes to offer firm and interruptible ship loading services pursuant to Rate Schedules LNG-1, LNG-3¹¹ (Firm Services) and LNG-2 (Interruptible Service). Ultimately, Southern LNG notes it would have the capacity to provide bi-directional service to allow its customers the flexibility to respond to applicable market conditions by either importing or exporting LNG.

B. Elba Express Company LLC (Docket No. CP14-115-000)

15. In Phase I of the Elba Express Modification Project, Elba Express proposes to: (1) construct additional compression facilities at the existing Hartwell Compressor Station; (2) construct two new compressor stations, the Jefferson County Compressor

¹¹ Rate Schedule LNG-3 provides for the receipt, delivery, storage, vaporization, and firm terminal services provided by the Elba III Expansion (*Southern LNG, Inc.*, 120 FERC ¶ 61,258).

Station and the Rincon Compressor Station; (3) modify and reconfigure existing pipeline facilities; and (4) construct metering facilities.

Phase I

Pipeline Facilities

16. Elba Express proposes to reconfigure the Twin 30s Pipeline to segregate the two 30-inch-diameter pipelines; one of the lines would be dedicated to taking gas away from the Elba Express pipeline at Port Wentworth to the proposed liquefaction facilities to be located at the terminal and the other 30-inch-diameter line would be dedicated to taking gas from the terminal to Port Wentworth. This modification of the Twin 30s Pipeline would consist of (1) removal of the clapper from a check valve, modification of the receiving trap for the west line of the Twin 30s Pipeline, and potential modification of the sending trap for the Elba Express pipeline at Port Wentworth in Chatham, Georgia; (2) removal of a check valve at approximately MP 4.795 of the west line of the Twin 30s Pipeline in Jasper County, South Carolina; and (3) installation of the ELC meter station tap and potential modification of the sending trap of the west line of the Twin 30s Pipeline located on Elba Island in Chatham County, Georgia, at approximately MP 0 of the Twin 30s Pipeline. In addition, Elba Express proposes to install facilities at the terminal to allow boil-off gas that is received from Southern LNG to be blended with gas being delivered to ELC to reduce the amount of nitrogen in the boil-off gas produced from the liquefaction facility.

17. Elba Express proposes to construct two taps and install electronic flow measurement equipment at new meter stations that are proposed to be constructed as part of the Elba Liquefaction Project at MP 0 of the Twin 30s Pipeline in Chatham County, Georgia. In addition, Elba Express proposes to construct two meter stations, the Elba Express to Carolina Gas Meter Station and the Elba Express to SNG Meter Station, at an existing metering facility located in Port Wentworth at MP 0 on the existing 42-inch-diameter Elba Express pipeline in Chatham County, Georgia. Finally, Elba Express proposes to add pressure control in order to manage the flow of natural gas into SNG's Wrens-Savannah Pipeline at Elba Express's existing North Manor Meter Station at MP 9.8 on the existing 42-inch-diameter Elba Express pipeline in Effingham County, Georgia.

Compression Facilities

18. The existing Hartwell Compressor Station is currently located on the 36-inch-diameter Elba Express Pipeline at approximately milepost (MP) 186 in Hart County, Georgia. Elba Express proposes to install two additional gas turbine compressors totaling 31,800 horsepower (hp) at the Hartwell Compressor Station. Further, Elba Express proposes to construct and operate the new Jefferson County Compressor Station in Jefferson County, Georgia, consisting of a single 15,900 hp gas turbine compressor, on

an approximately 30-acre site at MP 94 adjacent to the existing 42-inch-diameter Elba Express Pipeline. Finally, Elba Express proposes to construct and operate the new Rincon Compressor Station in Effingham County, Georgia, consisting of a single 15,900 hp gas turbine compressor, on an approximately 32-acre site near MP 11, adjacent to the existing 42-inch-diameter Elba Express Pipeline.¹²

Phase II

19. In Phase II, Elba Express proposes to install one additional 15,900 hp gas turbine compressor unit at the existing Hartwell Compressor Station.

Phase III

20. Elba Express proposes to install one additional 15,900 hp gas turbine compressor unit and rewheel the existing 10,000 hp gas turbine at the existing Hartwell Compressor Station. In addition, Elba Express proposes to install one additional 15,900 hp gas turbine compressor unit at the Jefferson County Compressor Station that would be constructed in Phase I. Elba Express proposes to install an additional electric motor-driven 15,000 hp compressor unit at the Rincon Compressor Station that would be constructed during Phase I.

¹² As noted above, Southern filed an application in Docket No. CP14-493-000 for authorization to construct and operate its Zone 3 Expansion Project, consisting of additional compression, a 3.3-mile pipeline loop, and relocation of an existing compressor unit. To provide this incremental service to its Zone 3 customers, Southern has entered into a precedent agreement with its affiliate Elba Express for approximately 235,000 MMcf/d of firm transportation capacity. Since Southern's project is dependent on the Elba Express Modification Project, which is authorized herein, the Commission is acting on Southern's request in Docket No. CP14-493-000 concurrently with its action here. The cumulative environmental impacts of Southern's Zone 3 Expansion Project were evaluated in the February 5, 2016 Environmental Assessment (EA) for Docket Nos. CP14-103-000 and CP14-115, and were not expected to significantly contribute to cumulative impacts in the area of the proposed Elba Liquefaction Project and the Elba Express Modification Project. *See* EA at 2-139. Likewise, the cumulative environmental impacts of the Elba Liquefaction Project and the Elba Express Modification Project were evaluated in the October 31, 2014 EA for the Zone 3 Expansion Project and were not expected to significantly contribute to the cumulative impacts for that project. *See* Docket No. CP14-493-000, EA at 37.

21. Elba Express entered into a precedent agreement with Shell LNG, one of its existing shippers, on January 24, 2013, for firm north-to-south transportation capacity on the Elba Express pipeline. Under the precedent agreement, Elba Express agreed to modify Shell LNG's existing Elba Express service agreement to allow for a change in Shell LNG's existing delivery and receipt points, and to construct certain compression and measurement facilities on the Elba Express pipeline to accommodate such delivery and receipt point modifications. In July 2013, Elba Express posted an open season soliciting bids and signed precedent agreements with six shippers that signed seven precedent agreements for 769 MMcf/d of capacity on the new facilities. Elba Express accepted one bid for turn-back capacity, which it was able to integrate into the design of the facilities for the Elba Express Modification Project.

22. Elba Express estimates that the total cost for all phases of the project will be approximately \$343 million. Elba Express proposes to charge its existing system rates for firm transportation service and for fuel for the project. All shippers have agreed to pay negotiated rates.

III. Public Notice, Interventions, Comments, and Protests

23. Notice of applications for the Elba Liquefaction Project and the Elba Express Modification Project were published in the *Federal Register* on April 10, 2014 (79 Fed. Reg. 19,895) and (79 Fed. Reg. 19,898), respectively. As listed in Appendix A, several parties filed timely, unopposed motions to intervene.¹³

24. Also, as listed in Appendix A, several parties filed untimely motions to intervene. We find that these parties filing untimely motions to intervene have demonstrated an interest in this proceeding, and further find that granting intervention at this stage of the proceeding will not cause undue delay or disruption or otherwise prejudice the applicant or other parties.¹⁴ Accordingly, we will grant the late motions to intervene.

25. Sierra Club filed a protest to the application in Docket No. CP14-103-000. In its protest, Sierra Club argued that the project is not in the public interest because it will have significant adverse environmental and economic effects, such as increased natural gas prices, and is not supported by adequate environmental and economic analysis. In addition, although BG LNG Services, LLC (BG LNG) did not oppose the projects, it

¹³ 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(c) (2015).

¹⁴ 18 C.F.R. § 385.214(d) (2015).

claimed in Docket No. CP14-103-000 that Southern LNG's interruptible and overrun rates were not computed in accordance with Commission policy. ELC, Southern LNG, and Elba Express filed a joint answer to Sierra Club's protest and BG LNG's comments. Although the Commission's Rules of Practice and Procedure generally do not permit answers to protests,¹⁵ we find good cause to waive our rules and admit this pleading because it provided information that assisted in our decision making.¹⁶

IV. Requested Authorizations

A. Elba Liquefaction Project (Docket No. CP14-103-000) – NGA Section 3 Authorization

26. Because the proposed LNG liquefaction facilities and modified terminal facilities will be used to accommodate the export and import of natural gas to and from foreign countries, both the construction and operation of the facilities and their location require approval by the Commission under section 3 of the NGA.¹⁷ While NGA section 3 provides that an application for the exportation or importation of natural gas be approved if the proposal "will not be inconsistent with the public interest," 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."¹⁸

¹⁵ 18 C.F.R. § 385.213(a)(2) (2015).

¹⁶ 18 C.F.R. § 385.101(e) (2015).

¹⁷ The regulatory functions of NGA section 3 were transferred to the Secretary of Energy in 1977 pursuant to section 301(b) of the Department of Energy Organization Act, Pub. L. No. 95-91, 42 U.S.C. § 7101 *et seq.* In reference to regulating the imports or exports of natural gas, the Secretary subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of natural gas import and export facilities and the site at which such facilities shall be located. The most recent delegation is in DOE Delegation Order No. 00-044.00A, effective May 16, 2006. Applications for authorization to import or export natural gas must be submitted to the Department of Energy (DOE). The Commission does not authorize importation or exportation of the commodity itself.

¹⁸ For a discussion of the Commission's authority to condition its approvals of facilities under section 3 of the NGA, *see, e.g., Distrigas Corporation v. FPC*, 459 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).

27. We decline to address the economic claims raised by the Sierra Club (e.g., that exports will result in increased natural gas prices), as DOE is authorized to analyze such issues. In conditionally granting Southern LNG long-term authorization to export LNG to Free Trade Agreement (FTA) nations,¹⁹ DOE recognized substantial evidence of economic and other public benefits, concluding that the authorization was not inconsistent with the public interest. We recognize DOE's public interest findings in issuing our order. Among other things, DOE found that exporting natural gas will lead to net benefits to the U.S. economy and can counteract concentration within global LNG markets, thereby diversifying international supply options and improving energy security for U.S. allies and trading partners. On balance, DOE found that the likely net economic benefits and other non-economic or indirect benefits outweighed the potential negative impacts of the proposed exports.

28. We will limit our NGA section 3 review to environmental impacts associated with the Elba Liquefaction facilities used to facilitate the exports. As noted above, the Commission has delegated authority to approve 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.

29. However, the Secretary of Energy has not delegated to the Commission authority to approve or disapprove the import or export of the commodity itself, nor is there any indication that the Secretary's delegation authorized the Commission to consider the types of economic issues raised by the Sierra Club.²⁰ Indeed, as Sierra Club notes, it raised these same concerns in Southern LNG's export authorization proceeding, which DOE thoroughly considered in finding that Southern LNG's requested export authorization will not be inconsistent with the public interest.

¹⁹ See *Southern LNG Company, L.L.C.*, FE docket No. 12-54-LNG, Order No. 3106 (June 15, 2012). Southern LNG states that it filed an application with DOE on August 31, 2012, for long-term authorization to export natural gas to non-FTA nations. The non-FTA application is currently under DOE review. Application, Docket No. CP14-103-000 at 22.

²⁰ See *National Steel Corp.*, 45 FERC ¶ 61,100, at 61,333 (1988), which states: "The [Office of Fossil Energy], pursuant to its exclusive jurisdiction, has approved the importation with respect to every aspect of it except the point of importation... 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."

30. Further, we concur with the findings set forth in the February 5, 2016 environmental assessment (EA), which concludes that the environmental impacts associated with the construction and operation of the Elba Liquefaction Project will be minimal. The Elba Liquefaction Project will be primarily located within areas previously evaluated and assessed in conjunction with the Commission's earlier environmental reviews and approvals of the terminal. Further, the Elba Liquefaction Project will not involve the construction of any new LNG storage tanks, as the project will be able to use the existing tank infrastructure at the terminal. In addition, the Elba Liquefaction Project is not expected to result in an increase in the size and/or frequency of LNG carriers from that previously contemplated for the terminal. Therefore, as discussed below, we find that, subject to the conditions imposed in this order, the Elba Liquefaction Project is not inconsistent with the public interest.

**B. Elba Express Company (Docket No. CP14-115-000) –
NGA Section 7 (c) Authorization**

31. Since Elba Express's proposed facilities 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 NGA sections 7(c) and (e).²¹

32. The Certificate Policy Statement provides guidance for evaluating proposals to certificate new pipeline construction.²² The Certificate Policy Statement established 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 explained 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

²¹ 15 U.S.C. §§ 717f(c) and 717f(e) (2012).

²² *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

relying on subsidization from 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 construction. 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 benefits outweigh the adverse effects on economic interests will the Commission then proceed to complete the environmental analysis where other interests are considered.

34. As discussed above, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. Consistent with Commission policy, Elba Express proposes to utilize its existing Rate Schedule FTS reservation charge as the initial rate for the three phases of the project, because incremental rates calculated for comparative purposes for all phases of the project are less than the existing system rate. As demonstrated in Exhibit N – Revenues and Expenses to Elba Express's application and based on actual contract volumes and the maximum Rate Schedule FTS recourse rate (or the actual negotiated rate when the negotiated rate is lower than the recourse rate), the revenues for each phase of the project will exceed the costs, thus demonstrating that Elba Express's existing customers will not subsidize the expansion. Therefore, since none of the costs of the expansion are in Elba Express's currently-effective rates and because project revenues would exceed project costs,²³ Elba Express's proposal to charge its existing rates will not result in subsidization by any existing customers and is consistent with the Policy Statement's threshold requirement.

35. We also find that the proposal will not degrade service to Elba Express's existing customers. The project will provide the added benefit of increased flexibility to Elba

²³ Utilizing actual contract volumes and the maximum FTS recourse rate (or the actual negotiated rate when the negotiated rate is lower than the recourse rate), Elba Express estimates the first year annual incremental revenues to be \$50,125,359 which exceeds Elba Express's annual first year cost of service of \$33,465,934 by \$16,659,425. For years 2 and 3, the incremental revenues would be \$54,820,938 in each year with an annual cost of service of \$38,442,881 and \$36,852,347, in year 2 and year 3, respectively. For year 4, the incremental revenues are \$77,845,138, which exceeds the annual cost of service of \$60,347,375. See Elba Express's September 18, 2014 Response to Data Request No. 7.

Express's existing customers by providing additional compression to support additional bi-directional flow. The increased compression and enhanced bi-directional capacity will benefit Elba Express's existing customers, without affecting Elba Express's ability to meet its existing firm obligations to those customers. In addition, Elba Express's largest existing customer on the Elba Express Pipeline is a subscriber to the Elba Express Modification Project and will benefit from the additional capacity on a firm basis. Further, by facilitating the transportation of natural gas to the terminal for liquefaction and export, as well as to multiple markets in the southeastern U.S., the Elba Express Modification Project will provide a critical transportation link and will increase the supply options available for shippers connected to Elba Express's system. In addition, no pipeline companies or their captive customers have protested the application. Thus, we find the proposed project will not result in any adverse impact on Elba Express's existing customers, or on other existing pipelines or their captive customers.

36. We also find that Elba Express has designed the Elba Express Modification Project and taken appropriate steps to mitigate or avoid any potential adverse impact on landowners and the surrounding communities. All of the proposed compression will be installed at existing compressor station locations or sites adjacent to the existing Elba Express Pipeline. In addition, no landowners protested the application.

37. The Elba Express Modification Project is fully subscribed and the shippers will have access to new markets and supplies. Further, the project will facilitate the bi-directional flow of natural gas on the Elba Express Pipeline and thus enhance flexibility and reliability for new and existing customers. Based on the benefits the project will provide and the minimal adverse effects on existing pipeline shippers, other pipelines and their captive customers, and landowners and surrounding customers, the Commission finds, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of Elba Express's proposal, subject to the conditions discussed below.

C. Southern LNG (Docket No. CP14-103-000) – NGA Section 7(b) Authorization

38. Southern LNG proposes to abandon by removal its LNG truck loading facilities that were constructed when the LNG terminal was initially authorized in 1972, but were not recommissioned at the time of the LNG terminal's reactivation in 2001. Southern LNG's truck loading facilities include the existing scale house, truck scales, walkways, foundations and ancillary equipment. Because these facilities were not recommissioned and are not currently active, their abandonment will not impact service to Southern LNG's existing customers. Nor are these facilities necessary to serve the anticipated use of the terminal. Based upon the foregoing, the proposed abandonment is consistent with section 7(b) of the NGA and is permitted by the public convenience or necessity. We direct Southern LNG to remove from its tariff all references to the LNG truck loading facilities.

V. Rates

A. Southern LNG – Docket No. CP14-103-000

39. Southern LNG's proposed Rate Schedules LNG-1 and LNG-3, Monthly Maximum Daily Loading Quantity Reservation Charge (MDLQ) for Ship Loading Service rates are calculated using a \$70,833,517 annual cost of service and MDLQ reservation billing determinants of 68,717,455 dekatherms (Dth) per month. Southern LNG states the maximum physical capacity for the ship loading service is based on the capacity to load liquid onto ships as expressed in gallons of LNG per minute. Therefore, Southern LNG converted the maximum physical capacity to Dth/day.²⁴ Southern LNG's proposed MDLQ reservation charge is \$1.0308 per Dth/month.

40. Southern LNG's proposed Rate Schedule LNG-2 Interruptible Ship Loading service charge and Rate Schedule LNG-1 and LNG-3 MDLQ overrun charge is calculated using the same \$70,833,517 annual cost of service with annual billing determinants of 186,332,500 Dth.²⁵ Southern LNG states its maximum daily DOE-approved export quantity is 500,000 Mcf per day. Southern LNG's proposed annual billing determinants of 186,332,500 Dth are derived by the following: 500 MMcf/d times 1.021 Btu conversion factor times 365 days. Southern LNG's proposed Rate Schedule LNG-2 Interruptible Ship Loading service charge and Rate Schedule LNG-1 and LNG-3 MDLQ overrun charge is \$0.3801 per Dth. Southern LNG states that, pursuant to section 26 of the General Terms and Conditions of its FERC Gas Tariff, 100 percent of any interruptible revenues, including MDLQ overrun revenues, will be credited to Southern LNG customers.²⁶

41. Southern LNG proposes a K-7 Boil Off Compressor charge of \$2.0624 per Dth of gas compressed for Rate Schedules LNG-1, LNG-2 and LNG-3. Southern LNG notes its rate design for the K-7 Boil Off Compressor charge is comparable to the rate design approved by the Commission for Southern LNG's existing K-6 Boil Off Compressor

²⁴ 46,230 gallons per minute times 0.08602 Dth/gallon times 1,440 minutes in a day times 12 months equals 68,717,455 Dth.

²⁵ See Application, Exhibit P, Sheet 6.

²⁶ *Id.* n.2.

surcharge.²⁷ Southern LNG will assess this surcharge only on shippers that use the new K-7 compressors. In addition, Southern LNG proposes a K-7 Boil Off Compressor Electric Power Cost charge of \$0.1645 per Dth of gas compressed for Rate Schedules LNG-1, LNG-2 and LNG-3.

42. In the event that a customer's vessel requires more than forty hours to reach a cryogenic state suitable to load LNG cargo, Southern LNG proposes to charge a Ship Cool Down Excess Lay charge of \$65,000 per day for each 24-hour period in which the vessel remains at the dock in excess of the initial forty hours. Southern LNG provides that it will waive the Ship Cool Down Excess Lay charge in the event that no other vessel under a firm service is scheduled to arrive during the day in which the charge would apply or for any day for which the delay is caused by Southern LNG's operations.

43. BG LNG claims that Southern LNG's proposed interruptible ship loading rate, under Rate Schedule LNG-2, and ship loading overrun rate, under Rate Schedules LNG-1 and LNG-3, have not been computed in accordance with Commission policy. BG LNG maintains that the Commission has stated that rates for interruptible services (including overrun rates) should be the 100 percent load factor equivalent of the corresponding rate for firm service.²⁸ BG LNG states Southern LNG's proposed interruptible and overrun rates appear to be approximately ten times what the rate would be had Southern LNG followed Commission policy.

44. In addition, BG LNG requests that the Commission require Southern LNG to isolate costs and maintain separate books and records for the Elba Liquefaction Project. BG LNG states that the Commission regularly directs companies proposing expansion facilities to keep separate books and records to ensure that a direct allocation of costs is possible.²⁹ In its answer, Southern LNG responds that its interruptible ship loading commodity rate of \$0.3801 and the MDLQ overrun rate of \$0.3801 are 100 percent load

²⁷ *Southern LNG Company, L.L.C.*, 139 FERC ¶ 61,120 (2012).

²⁸ BG LNG's Protest at 2 (citing *El Paso Natural Gas Co.*, Opinion No. 517, 139 FERC ¶ 61,095, at P 184 (2012); *High Island Offshore System, L.L.C.*, 110 FERC ¶ 61,043, at P 198 (2005)).

²⁹ *Id.*, (citing *Southern LNG, Inc.*, 122 FERC ¶ 61,137 at P 25; *Transcontinental Gas Pipe Line Corp.*, 106 FERC ¶ 61,299, at P 191 (2004)).

factor rates derived by dividing the MDLQ cost of service of \$70,833,517 by the annual units of 186,332,500 Dth. Therefore, Southern LNG asserts that its proposed interruptible and overrun rates are consistent with Commission policy.³⁰ Southern LNG also states that it will adhere to Commission policy by maintaining separate books and records for the project.³¹

45. The Commission has reviewed Southern LNG's proposed cost of service, allocation, and rate design used to develop its proposed recourse rates under Rate Schedules LNG-1, LNG-2, and LNG-3 and finds that they reasonably reflect current Commission policy, except as discussed below. The Commission accepts Southern LNG's proposed rates as initial rates for service under Rate Schedules LNG-1, LNG-2 and LNG-3, subject to conditions.

46. Southern LNG's proposed interruptible ship loading rate, under Rate Schedule LNG-2, and ship loading overrun rate, under Rate Schedules LNG-1 and LNG-3, are not the 100 percent load factor equivalent of its corresponding rate for firm service (in this case, Southern LNG's firm ship loading rate under Rate Schedules LNG-1 and LNG-3). As noted above, Southern LNG proposes to derive the billing determinants for firm service based on the maximum physical capacity to load LNG onto ships for the project, while the billing determinants used for calculating the interruptible ship loading charge are derived using Southern LNG's maximum daily approved export quantity, as approved by DOE.

47. In its calculation of the interruptible ship loading charge and ship loading overrun charge, Southern LNG uses annual billing determinants of 186,332,500 Dth. If Southern LNG had instead calculated annual billing determinants using the maximum physical capacity to load LNG onto ships for the project, similar to its proposal for the firm ship loading service, the annual billing determinants would be 2,090,159,937 Dth and thus would result in dramatically lower rates.³² We find that Southern LNG's proposal to design the interruptible ship loading charge and ship loading overrun charge based on

³⁰ Southern LNG's Answer at 34.

³¹ *Id.* n.124.

³² 46,230 gallons per minute times 0.08602 Dth/gallon times 1,440 minutes in a day times 365 days = 2,090,159,937 Dth.

different billing determinants from that of its firm ship loading service charge is contrary to long-standing Commission policy that the rate for interruptible service should be designed on a 100 percent load factor basis of the corresponding firm rate.³³

Commission policy requires the use of a 100 percent load factor rate for interruptible service unless there are extenuating circumstances that would require an exception. Southern LNG has not demonstrated a need for such an exception.³⁴ Accordingly, Southern LNG is directed to revise its proposed interruptible ship loading charge under Rate Schedule LNG-2 and ship loading overrun charge under Rate Schedule LNG-1 and LNG-2 as discussed above.

48. To assure that costs are properly allocated between Southern LNG's existing shippers and the incremental services proposed in this proceeding, the Commission will require Southern LNG to keep separate books and accounting of costs attributable to the proposed incremental services. Further, the books should be maintained with applicable cross-reference as required by section 154.309 of the Commission regulations. 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 is provided consistent with Order No. 710.³⁵

49. Southern LNG's current Rate Schedules LNG-1 and LNG-3 provide for receipt, delivery, storage, vaporization, and firm terminal services, while Rate Schedule LNG-2 provides for interruptible terminal service. Southern LNG proposes to amend Rate Schedules LNG-1, LNG-2, and LNG-3 to include its proposed ship loading service. Southern LNG's proposed revisions to these rate schedules include: (1) defining Maximum Daily Loading Quantity and Maximum Daily Receipt Quantity; (2) providing for the proposed new ship loading charges and surcharges; and (3) defining the procedures for accessing the Ship Cool Down Excess Lay Charge. In addition, Southern LNG proposed miscellaneous revisions to its General Terms and Conditions. Southern LNG's proposed tariff changes are approved.

³³ *El Paso Natural Gas Co.*, 112 FERC ¶ 61,150, at PP 50-51 (2005); *High Island Offshore System, L.L.C.*, 110 FERC ¶ 61,043, at P 200 (2005); *Southern Natural Gas Co.*, 99 FERC ¶ 61,345, at PP 85-87 (2002).

³⁴ *See Discovery Gas Transmission, LLC*, 107 FERC ¶ 61,124, at P 57 (2004).

³⁵ *See Revisions to Forms, Statements, and Reporting Requirements for Natural Gas Pipelines*, Order No. 710, FERC Stats. & Regs. ¶ 31,267 (2008).

50. Among the proposed tariff changes, section 4.4 (Rates and Fuel) of Rate Schedule LNG-1 provides for a Ship Cool Down Excess Lay Charge “as more particularly described in section 5.1 of this Rate Schedule.” Section 4.4 of Rate Schedules LNG-2 and LNG-3 includes the same language. Section 5.1 of Rate Schedules LNG-2 and LNG-3 includes a new provision detailing the Ship Cool Down Excess Lay Charge procedures; however, section 5.1 of Rate Schedule LNG-1 does not include this provision. We direct Southern LNG to include in section 5.1 of Rate Schedule LNG-1 a provision similar to section 5.1 of Rate Schedules LNG-2 and LNG-3 describing the Ship Cool Down Excess Lay Charge procedures.

B. Elba Express – Docket No. CP14-115-000

51. Elba Express will provide transportation service under its existing rate schedules for the additional north-to-south capacity created by the Elba Express Modification Project. Elba Express proposes to charge its system recourse rates for this service. Furthermore, shippers requesting service on the Elba Express Modification Project have agreed to pay negotiated rates.

52. Using the information provided by Elba Express in its September 18, 2014 Data Response, the comparative incremental rates for FTS service on the Elba Express Modification Project would be \$3.92/Dth for Phase 1,³⁶ \$3.75/Dth for Phase 2,³⁷ and \$4.61/Dth for Phase 3.³⁸ Since the estimated incremental rates are less than Elba Express’s existing recourse rate of \$8.0776/Dth, the Commission approves the use of Elba Express’s existing system FTS reservation charge as the initial recourse rate for the Elba Express Modification Project. Elba Express proposes to use the generally-

³⁶ This rate is calculated by dividing the Phase 1 throughput of 8,529,456 Dth (710,788 Dth multiplied by 12) into the Year 1 cost of service of \$33,465,934.

³⁷ This rate is calculated by dividing the Phase 2 throughput of 10,244,736 Dth (142,940 Dth multiplied by 12 plus Phase 1 throughput of 8,529,456 Dth) into the Year 2 cost of service of \$38,442,881.

³⁸ This rate is calculated by dividing the Phase 3 (Year 4 cost of service) throughput of 13,094,736 Dth (237,500 Dth multiplied by 12 plus the combined Phase 1 and Phase 2 throughput of 10,244,736 Dth) into the Year 4 cost of service of \$60,347,375.

applicable Rate Schedule ITS rate, currently \$0.2656/Dth, as the rate for interruptible service.

53. Elba Express proposes tariff changes to Rate Schedule FTS, General Terms and Conditions, and Rate Schedule FTS Form of Service Agreements. Elba Express states that the changes are designed to provide customers with the right to reverse flow on a firm basis when certain conditions are met. The proposed changes will allow Elba Express's customers the opportunity to enhance their firm service with flexible receipt and delivery points on a primary firm basis under specified circumstances. Elba Express shippers with existing south-to-north capacity will have primary rights on both a south-to-north and north-to-south basis as long as (i) total nominations on any day do not exceed their transportation demand contract quantity, and (ii) the shipper acquiring the reverse flow rights is willing to pay for the facilities to be installed in order to provide the reverse flow capacity. Elba Express's proposed tariff changes are approved.

54. Elba Express also proposes to charge its existing Rate Schedule FTS fuel retention percentage. In its September 18, 2014 Response to Commission staff's August 28, 2014 data requests, Elba Express provides two justifications for its proposal. First, Elba Express asserts that, from a quantitative perspective, when both the fuel and rate impacts are considered in aggregate, rolling in the project will provide a significant financial benefit to existing shippers ranging from \$10.2 million to \$15.9 million per year. Second, from a non-quantitative perspective, under the Certificate Policy Statement, rolled-in pricing is appropriate where, as is the case here, an inexpensive expansion is made possible because of earlier costly construction.³⁹ In support of its quantitative justification, Elba Express provides information which, it asserts, shows that project revenues, inclusive of a projected fuel deficit associated with the project, will exceed the cost of service, thus providing a net annual system benefit.⁴⁰ Elba Express notes that in similar expansions where there is a fuel deficit but an overall system benefit, the Commission has found that the existing fuel retention percentages should apply to the expansion.⁴¹

55. Under the Certificate Policy Statement, the threshold requirement for a pipeline proposing a new project is that it must be prepared to financially support the project

³⁹ See September 18, 2014 Data Response to Data Request No. 7 (citing Certificate Policy Statement, 88 FERC ¶ 61,227, at 61,746).

⁴⁰ *Id.*

⁴¹ *Id.*

without relying on subsidization from its existing customers.⁴² If the pipeline demonstrates that revenues from the proposed project are expected to exceed the project's cost of service, such that its existing customers will not be burdened by higher rates, we will grant the pipeline's request for a pre-determination of rolled-in rate treatment for the cost of the project, absent a material change in circumstances. We make this determination in the certificate proceeding to provide certainty regarding the potential economic impacts of a project before it goes forward.⁴³

56. Elba Express asserts that where, as here, the expansion project is projected to result in a net system benefit inclusive of fuel, it is appropriate for the Commission to grant a presumption of rolled-in rate treatment for fuel. In support of its position, Elba Express cites two cases – *Kern River Transmission Company*⁴⁴ and *Midcontinent Express Pipeline LLC*.⁴⁵ In *Kern River*, the Commission granted rolled-in rate treatment for the project based on an analysis that the benefits of the roll-in exceeded the costs of the increased fuel requirements; however, it required Kern River in future compliance filings to continue to show the net benefits and if, during any year the fuel costs exceeded the excess revenues, Kern River was required to allocate the excess portion of fuel costs to its expansion shippers.⁴⁶ In *Midcontinent Express*, the Commission granted rolled-in rate treatment for a phased expansion project based on a similar analysis. However, the Commission stated that the rolled-in rate determination was based on all expansion costs being allocated to expansion shippers and the fuel rate for non-expansion shippers not being affected.⁴⁷

57. We agree that the impact of the project on the pipeline's fuel usage must be addressed in the Commission's analysis of whether existing shippers are subsidizing an expansion. However, we disagree that this analysis must be combined with the analysis on the impact of the reservation rate into one analysis to determine whether subsidization will occur. While the *Kern River* and *Midcontinent Express* orders combined the rate and

⁴² See Certificate Policy Statement, 88 FERC ¶ 61,227, at 61,746.

⁴³ See *Tennessee Gas Pipeline Co., L.L.C.*, 140 FERC ¶ 61,120, at P 19 (2012).

⁴⁴ 96 FERC ¶ 61,137, at 61,582 (2001) (*Kern River*).

⁴⁵ 128 FERC ¶ 61,253, at P 29 (2009) (*Midcontinent Express*).

⁴⁶ *Kern River*, 96 FERC at 61,582.

⁴⁷ *Midcontinent Express*, 128 FERC ¶ 61,253, at P 33.

fuel analysis, these orders do not reflect current Commission policy. Current Commission policy is generally to address these issues in separate analyses, and it is common for a project such as Elba Express's to qualify for rolled-in rate treatment with regard to the reservation rate but to have a separate fuel surcharge assessed if the project increases the pipeline's system fuel rate.⁴⁸ One of the main reasons these two analyses are kept separate is that combining the two analyses would require a monetization of the impact of the project on the pipeline's increased fuel requirements and some future projection of the price of natural gas. For example, while Elba Express projects fuel costs of \$8,927,900, that projection is based on gas prices of \$4.00/Dth. If gas prices were to increase significantly, to \$8.00/Dth, for example, fuel costs would double to \$17,855,800. Conducting an analysis that relies on assuming a future fuel price is inherently subject to error, unlike the roll-in analysis, where the Commission has the project revenues and the project cost of service clearly before it. Therefore, we now separate these analyses and look at the fuel impact of the expansion solely in terms of whether the added compression will increase the pipeline's overall fuel rate.⁴⁹

58. In addition, the customers under the two analyses may be different. Rolling in the non-fuel expansion costs directly impacts firm transportation customers paying a reservation charge. Fuel costs, however, are borne by all shippers transporting gas on the system, whether they are using firm or interruptible transportation. Since those shippers subject to a company's fuel charge almost always includes a broader group of shippers than those firm transportation customers subject to a company's reservation charge, it is not appropriate to combine our analysis of the two sets of costs.⁵⁰

⁴⁸ See, e.g., *Southeast Supply Header, LLC*, 151 FERC ¶ 61,032 (2015); *ETC Tiger Pipeline, LLC*, 134 FERC ¶ 61,084 (2011); *Wyoming Interstate Co., Ltd.*, 130 FERC ¶ 61,251 (2010); *Rockies Express Pipeline LLC*, 128 FERC ¶ 61,036 (2009); *El Paso Natural Gas Co.*, 104 FERC ¶ 61,303 (2004).

⁴⁹ See *Southeast Supply Header, LLC*, 151 FERC ¶ 61,032, at P 10 (2015); *PG&E Gas Transmission Northwest Corp.*, 96 FERC ¶ 61,194, *reh'g denied*, 97 FERC ¶ 61,101 (2001) (where the Commission analyzed the rate and fuel components separately and granted rolled-in rate treatment for the non-fuel costs of a proposed expansion, but required the applicant to design a surcharge to ensure that expansion shippers are allocated increased fuel costs as a result of the expansion.).

⁵⁰ *Id.* P 11.

59. Finally, the timing of any impact related to the two sets of costs may be significantly different. Adjustments to fuel trackers are periodic and predictable, whereas general rate cases are not. While, in this case, it is predictable that Elba Express's fuel rate will increase in its next fuel tracker filing, which is often made on an annual or semi-annual basis, the timing of the benefits that will result from rolling in the project's incremental revenues is not at all predictable, since the pipeline is under no obligation to file a rate case; in fact, receipt of the incremental revenues associated with the project may actually permit the pipeline to delay the filing of its next general section 4 rate case.⁵¹

60. The Commission's policy with regard to the recovery of pipeline costs, in this case the increased fuel required to fuel the new compressors, is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. Without some type of incremental fuel surcharge, Elba Express's existing customers will experience increased fuel rates and will subsidize the project's expansion shipper's fuel requirements.

61. In its September 18, 2014 response, Elba Express estimates that, utilizing its fuel retention percentage of 0.77 percent, it would retain 1,429,351 Dth⁵² per year of fuel while estimating the fuel used by the Project facilities to be 2,231,975 Dth⁵³ per year during Phase 1 of the Project, resulting in a fuel under recovery of 802,624 Dth.⁵⁴ Elba Express has shown that utilizing its existing Rate Schedule FTS fuel retention percentage for the project capacity will result in existing customers experiencing increased fuel rates and subsidizing the project's expansion shipper's fuel requirements.⁵⁵ Therefore, we will

⁵¹ *Id.* P 12.

⁵² Exhibit 3, Column d, of Elba Express's September 18, 2014 Response to Data Request No. 7.

⁵³ Exhibit 3, Column f, of Elba Express's September 18, 2014 Response to Data Request No. 7.

⁵⁴ Exhibit 3 of Elba Express's September 18, 2014 Response shows similar under recoveries during Phase 2 (1,113,599 Dth) and Phase 3 (1,823,162 Dth).

⁵⁵ We note since the September 18, 2014 response, Elba Express has revised its currently effective Rate Schedule FTS fuel retention percentage from 0.77 percent to 0.69 percent (*Elba Express Company, L.L.C.*, Docket No. RP16-873-000 (May 11, 2016) (delegated letter order)). This change does not impact the Commission's analysis, as the

(continued ...)

require Elba Express to separately identify the incremental fuel associated with its project and to charge an incremental fuel rate for the project.⁵⁶

62. Accordingly, the Commission will deny Elba Express's request to recover fuel through its system fuel tracker mechanism. Instead, we will require Elba Express to file an incremental fuel reimbursement percentage with the Commission at least 30 days, but not more than 60 days, prior to initiation of its in-service date for the Elba Express Modification Project, to ensure that only the expansion shippers who use the capacity will pay for such expansion capacity. This finding is without prejudice to Elba Express proposing and fully supporting rolled-in treatment in a future NGA section 4 rate case.

63. Elba Express states in its application in Docket No. CP14-115-000⁵⁷ that it does not seek a presumption that the Elba Express Modification Project will be rolled into its existing rates in a future general NGA section 4 rate proceeding. Elba Express reiterates in its September 18, 2014 Data Response that it has not requested a pre-determination to roll in the costs in the next NGA Section 4 general rate case, but based on the analysis shown in the response to data request No. 7, it believes that such a pre-determination would be appropriate.

64. 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 section 4 proceeding, we will compare the cost of the project to the revenues generated utilizing actual contract volumes and the maximum

lower fuel retention percentage would result in less fuel retained and a greater under recovery of fuel.

⁵⁶ See *ANR Pipeline Co.*, 149 FERC ¶ 61,197, at P 23 (2014), *order denying reh'g*, 152 FERC ¶ 61,021 (2015); *Southeast Supply Header*, 148 FERC ¶ 61,121, at P 20 (2014), *order denying reh'g*, 151 FERC ¶ 61,032 (2015).

⁵⁷ See Elba Express Application at 17.

recourse rate (or the actual negotiated rate if the negotiated rate is lower than the recourse rate).⁵⁸

65. Based on actual contract volumes and the maximum Rate Schedule FTS recourse rate (or the actual negotiated rate when the negotiated rate is lower than the recourse rate), Elba Express estimates the first year annual incremental revenues to be \$50,125,359 which exceeds Elba Express's estimated annual first year cost of service of \$33,465,934 by \$16,659,425. For years 2 and 3, the incremental revenues would be \$54,820,938 in each year with an annual cost of service of \$38,442,881 and \$36,852,347, in year 2 and year 3, respectively. For year 4, incremental revenues are \$77,845,138, which exceeds the annual cost of service of \$60,347,375.⁵⁹ Because the incremental revenues exceed the projected costs for all three phases of the project, we grant Elba Express a pre-determination of rolled-in rate treatment for the costs associated with the project, absent any significant change in circumstances.

VI. Environmental Analysis

66. On March 1, 2013, Commission staff granted ELC, Southern LNG, and Elba Express's (collectively referred to as "Companies") request to use the pre-filing review process in Docket No. PF13-3-000. On April 22, 2013, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Planned Elba Liquefaction Project, Request for Comments on Environmental Issues, Notice of Onsite Environmental Review, and Notice of Public Scoping Meetings* (NOI) in the pre-filing docket. This NOI was published in the Federal Register on April 29, 2013,⁶⁰ and sent to 364 interested parties on the environmental mailing list including federal, state, and local officials; elected officials; agency representatives; environmental and public interest groups; Native American tribes; local libraries and newspapers in the project area; and affected property owners, which included landowners within one-half mile of the proposed project facilities. The NOI briefly described the Elba Liquefaction Project and Elba Express Modification Project (collectively referred to as the Elba Liquefaction Project or project) and the environmental assessment (EA) process, provided a preliminary list of issues

⁵⁸ See *Tennessee Gas Pipeline Company, L.L.C.*, 144 FERC ¶ 61,219, at P 22 (2013).

⁵⁹ See Elba Express's September 18, 2014 Response to Data Request No. 7.

⁶⁰ 78 Fed. Reg. 25074 (April 29, 2013).

identified by staff, invited written comments on the environmental issues that should be addressed in the EA, listed the date and location of two public scoping meetings,⁶¹ and established May 22, 2013, as the deadline for comments.

67. At the public scoping meetings, a total of 15 speakers presented comments about the project. Written comments also were received from eight entities, including the National Park Service (NPS) and National Oceanic Atmospheric Administration National Marine Fisheries Service (NMFS); Chatham County and the Cities of Wrens and Louisville, Georgia; one landowner; the Coastal Group Sierra Club (Sierra Club), and one interested citizen.⁶² Following the close of scoping, written comments were also received from the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA); the Catawba Tribal Historic Preservation; and the Chambers of Commerce from Georgia and Savannah. The transcripts of the public scoping meetings and all written scoping comments are part of the public record for the project.

68. On October 9, 2013, the Commission issued a letter to affected landowners and stakeholders that provided notification of the Companies' intent to add new facilities to the scope of the project; specifically, a new compressor station in Effingham County, Georgia and metering facilities in Chatham County, Georgia. The letter briefly described the new facilities and invited written comments on the environmental issues that should be addressed in the EA. The letter established November 8, 2013, as the deadline for comments. No comments were received in response to the letter.

69. To satisfy the requirements of the National Environmental Policy Act (NEPA), Commission staff prepared an EA for the Project. The DOT, U.S. Coast Guard, and U.S. Department of Energy participated in the preparation of the EA as cooperating agencies. Notice of the EA was published in the *Federal Register* on February 5, 2016, establishing a 30-day comment period that ended on March 7, 2016.⁶³ The EA was mailed to the staff's environmental mailing list and evaluates geology and soils; water resources, fisheries, and wetlands; vegetation and wildlife; land use, recreation, and visual

⁶¹ Commission staff held the public scoping meetings on May 7 and May 9, 2014, in Hartwell, Georgia, and Savannah, Georgia, respectively.

⁶² Table 1.6-1 of the EA provides a detailed and comprehensive list of issues raised during scoping.

⁶³ 81 Fed. Reg. 7336 (Feb. 5, 2016).

resources; socioeconomics; cultural resources; air quality and noise; reliability and safety; cumulative impacts; and alternatives.

70. A total of 35 comment letters were received by the close of the comment period. Letters received after March 7, 2016, continued to be posted to the Commission's eLibrary and were reviewed by staff for substantive concerns. The Commission received comments from federal, state, and local agencies, including the U.S. Fish and Wildlife Service (FWS), NPS, Council on Environmental Quality, Georgia Department of Natural Resources (GDNR) Coastal Resources Division, Municipal Gas Authority of Georgia, South Carolina Department of Environmental Health and Control (SCDHEC), and Savannah Economic Development Authority; one elected official; the general public, including nearby landowners; the Sierra Club; Center for a Sustainable Coast; the Southern Environmental Law Center (SELC); the Municipal Gas Authority of Georgia; Peoples Gas System; the Savannah Economic Development Authority; PCS Nitrogen Fertilizer, L.P.; the Georgia Tech Chapter of the American Association of Blacks in Energy; and the Companies.

71. The majority of the comments revisited matters previously raised in scoping comments that were addressed in the EA. One comment included a petition for a public comment meeting on the EA signed by approximately 145 individuals. Each individual provided similar reasons for a public hearing, including providing an opportunity for individuals to comment publicly on the EA. No comment meetings were necessary for the project as the Commission's public review and comment process was sufficiently publicized in numerous notices and mailings. In addition, the Companies provided minor corrections and updates to information in the EA and responded to several comments filed on the EA by others. Among these are general comments related to the adequacy of the environmental review; hazard analysis and emergency response procedures; air emissions; project-specific updates, clarifications, comments, and/or mitigation measures relating to construction and operation traffic levels; site locations and mapping updates; implementation of the EA recommendations; specifics on facility design; and reporting requirements. The Companies' filed clarifications regarding project design, impacts, and mitigation measures, which are further discussed below. Our review finds that these changes do not alter our conclusions with respect to the environmental impacts resulting from the project.

72. Specifically, the substantive comments received on the EA include project impacts on: air quality and greenhouse gas (GHG) emissions; groundwater, water quality, and water use; introduction of invasive species through ballast water discharges; impacts on federally protected species; consistency with ecological health standards; trucking impacts on Savannah and designated historic areas; impacts on Fort Pulaski National

Park and nearby sites; coastal zone consistency; impacts on South Carolina; stormwater management; dredging in the South Channel of the Savannah River; cumulative impacts; and public safety, hazards, and emergency response measures, including proximity of the project to schools and nearby residences.

73. The issues raised on these topics are evaluated further below. All other issues raised in comments on the EA were addressed and evaluated in the EA,⁶⁴ and do not require additional discussion.

A. Air Quality/Greenhouse Gas Emissions

74. Several commenters expressed concerns about impacts on air quality and associated health effects resulting from project-specific emissions. The EA reviews the existing air emissions and air quality modeling analyses conducted for the new and modified compressor and liquefaction facilities.⁶⁵ The modeling analyses demonstrate that potential emissions from new and modified compressor and liquefaction facilities would not cause or contribute to an exceedance of National Ambient Air Quality Standards (NAAQS). The NAAQS are established by the U.S. Environmental Protection Agency (EPA) for the protection of human health, including children, the elderly, and sensitive populations. The EA summarizes the air toxics analysis submitted by the Companies to the Georgia Environmental Protection Division, which has the Clean Air Act air quality permitting authority for the LNG Terminal and the Hartwell Compressor Station. The EA concludes that the LNG Terminal and Hartwell Compressor Station would not result in significant air quality impacts. The EA also summarizes the modeling analysis completed for the LNG Terminal as well as the conclusions for the Jefferson County and Rincon Compressor Stations. Overall, the EA concludes that operation of the facilities will be in compliance with the NAAQS and will not have a significant impact on air quality in the project area or region. We agree.

75. Several commenters also express concerns about direct impacts associated with the greenhouse gas (GHG) emissions of the project facilities on the Savannah coastal

⁶⁴ These issues include: general opposition to or support for the project; requests for an extension of the comment period; requests to prepare an EIS rather than an EA; the potential for contamination of groundwater due to spills of hazardous materials; general safety during construction and operation; and cumulative impacts regarding shale gas extraction.

⁶⁵ EA at 2-75 to 2-80.

community, which they report is already experiencing flooding due to rising seas. The GHG emissions associated with the construction and operation of the project were identified and quantified in section 2.7.1 of the EA.⁶⁶ The EA also reviews the project's cumulative impacts on climate change.⁶⁷ The analysis documents the current assessments of climate change reported by the Intergovernmental Panel on Climate Change, and the U.S. Global Change Research Program, and concludes that there is currently no standard methodology to determine that the project's incremental contribution to GHGs will result in physical effects on the environment, either locally or globally. In light of this, any conclusions with respect to the project's impact on global climate change would be speculative.

76. In its comments, the Sierra Club asserted that the Commission failed to consider the long-term effects of climate change, the social costs of climate change, and whether the project is justified in light of that cost. The Sierra Club is referring to the EPA social cost of carbon tool.⁶⁸ The social cost of carbon tool is used to estimate the comprehensive costs associated with a 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 initiatives. While we recognize the availability of this tool, we find that it would not be appropriate to use it for this project because: (1) the EPA states that "no consensus exists on the appropriate [discount] rate to use for analyses spanning multiple generations"⁶⁹ and consequently, significant variation in output can result; (2) the tool does not measure the actual incremental 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.

⁶⁶ *Id.* at 2-64 to 2-80.

⁶⁷ *Id.* at 2-142.

⁶⁸ See EPA, *Fact Sheet: Social Cost of Carbon*, (Nov. 2013), <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf>.

⁶⁹ *Id.*

77. Commenters also request that an analysis of the project's GHG emissions include the upstream gas production, compression, storage, transmission activities, and combustion of natural gas to be exported. Though the commenters disagree, we do not believe the potential increase of GHG emissions associated with the production, non-project transport, and non-project combustion are causally related to our action in approving this project, nor are the potential environmental effects reasonably foreseeable as contemplated by the Council on Environmental Quality's (CEQ) regulations. Moreover, as the Commission has previously stated and notes above, there is no standard methodology to determine whether, and to what extent, a project's incremental contribution to GHG emissions would result in physical effects on the environment, either locally or globally.⁷⁰ In addition, 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 before us is approved. With respect to climate change impacts of upstream production and downstream use, we are unable to predict the nature and extent of impacts associated with upstream production and downstream use and thus such impacts are not reasonably foreseeable for purposes of our analysis under NEPA. The specific source of the natural gas to be exported via the project is currently unknown and will likely change throughout the operation of the project. Similarly, the Commission does not know specifically where natural gas exported via the project will be ultimately used or what fuels it will displace. Contrary to the commenters' suggestions, these and other facts are indeed necessary in order for the Commission to conduct a meaningful analysis of the related effects.

78. The DOE "Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States"⁷¹ and "Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States,"⁷² provide certain general

⁷⁰ See, e.g., *Sabine Pass Liquefaction Expansion, LLC*, 151 FERC ¶ 61,012 at P 97, *on reh'g*, 151 FERC ¶ 61,253 (2015).

⁷¹ See U.S. Department of Energy, *Addendum to Environmental Review Documents Concerning Exports of Natural Gas From The United States* (August 2014), <http://energy.gov/sites/prod/files/2014/08/f18/Addendum.pdf> ("DOE Addendum").

⁷² See U.S. Department of Energy's National Energy Technology Laboratory, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, <http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf> ("Life Cycle Report").

estimates about the environmental impacts associated with natural gas production and end use. However, those impacts are not specific to the proposal before us. And, as the DOE explained, in the absence of information regarding where and when additional gas production will arise, the environmental impacts of such production “are not ‘reasonably foreseeable’ within the meaning of the CEQ’s NEPA regulations,” and “cannot [be] meaningfully analyze[d].”⁷³

79. Although not directly relevant to the proposal before the Commission, and not required by NEPA, the Commission notes the DOE Addendum’s conclusion that natural gas development leads to both short-and long-term increases in local and regional air emissions.⁷⁴ It also found that such emissions may contribute to climate change. But to the extent that natural gas production replaces the use of other carbon-based energy sources, DOE found there may be a net positive impact in terms of climate change.⁷⁵ The Life Cycle Report concludes that U.S. LNG exports for power production in European and Asian markets will not increase life-cycle GHG emissions, when compared to regional coal extraction and consumption for power production.⁷⁶

80. In comments filed on March 7, 2016, Karen Graine highlights the fact, as disclosed in the EA, that emissions levels associated with the project facilities will be significantly higher than the Prevention of Significant Deterioration (PSD) threshold.⁷⁷ As noted in the EA, the PSD permitting process already has been completed by the Georgia Environmental Protection Division and the Companies included a Best Available Control Technology analysis for carbon Monoxide (CO) and GHG as part of their PSD permit modification.⁷⁸ Further, air dispersion modeling was performed for CO using the EPA’s approved AERMOD dispersion modeling program and the highest modeled concentrations for each averaging period is below the applicable Significant

⁷³ DOE Addendum at 2. The Life Cycle Report similarly acknowledged the limitations and uncertainty in the underlying modeling data. *See* Life Cycle Report at 18.

⁷⁴ DOE Addendum at 32.

⁷⁵ *Id.* at 44.

⁷⁶ *See* Life Cycle Report at 18.

⁷⁷ *See* EA at 2-69 and 2-78.

⁷⁸ *Id.* at 2-69.

Impact Level. Therefore, we agree with the EA's conclusion that the LNG Terminal modification will not cause or contribute to an exceedance of the NAAQS.

B. Groundwater, Water Quality, and Water Usage

81. We received comments from the Sierra Club, Karen Grainey, and Alfred Kritter expressing concern that the water volumes required for operation of the liquefaction facilities could be significantly higher than that reported in the EA, which could cause further saltwater intrusion into the Floridan Aquifer. We acknowledge that the Companies' water use estimates are lower than the water use estimates cited by other LNG liquefaction facilities. However, we note that the Companies are utilizing a proprietary Moveable Modular Liquefaction System that differs from the systems proposed in other LNG liquefaction proposals and requires a smaller footprint. The LNG production rate for the Moveable Modular Liquefaction System units is considerably lower than the LNG production rate for other proposed LNG liquefaction facilities. Therefore, we have no reason to believe that the Companies' water use estimates have been underestimated. Based on the estimated water use volumes, the EA concludes that the existing wells located on Elba Island will meet the projected needs without modification or need for additional GDNR approval.⁷⁹ Mr. Kritter recommends that the water withdrawals be further analyzed, measured, and tracked. In the absence of any need for GDNR approval, and considering the volumes of water to be used, we do not believe there is a need for additional analysis, measurement, or tracking of water use by the Companies.

82. Pumping in the Floridan Aquifer has the potential to induce saltwater intrusion through the overlying confining layer if it reduces the hydraulic head enough to create a vertical downward gradient through the confining layer. Groundwater extraction from the liquefaction site wells is not expected to cause saltwater intrusion into the Floridan Aquifer during construction or long-term operation of the facility. However, pumping of the site wells could marginally contribute to saltwater intrusion if high-capacity wells were operating in the nearby area and inducing downward gradients through the confining layer.

83. The EA states that the Companies will use two existing wells on Elba Island for potable and process water supplies, estimates that the maximum volume of water to be

⁷⁹ *Id.* at 2-18.

used for hydrostatic testing will not exceed 30,000 gallons per day (gpd) on a rolling monthly average, and during operations will be approximately 9,000 gpd after the Phase II liquefaction facilities are on-line.⁸⁰ This marginal increase in groundwater extraction is not expected to cause saltwater intrusion into the Floridan Aquifer. The GDNR has placed a moratorium on new withdrawal permits from the Floridan Aquifer in Chatham County; however, this moratorium does not apply to the wells at the LNG Terminal because they were installed prior to the moratorium. In addition, the volumes of water needed for hydrostatic testing and operations will not exceed the GDNR permitting threshold of 100,000 gpd; therefore, no permit will be required for the proposed water uses.

84. Based on a review of the Georgia Groundwater Site Inventory (GWSI) database,⁸¹ only four wells are recorded within one mile of the liquefaction site boundary, all of which are located on Elba Island, and two of which, presumably, are the wells that would be used during construction and operations. The GWSI database only contains a very small number of all the wells in the state, and does not provide any information on well use or ownership owing to restrictions on sensitive data. Given these limitations, it is possible that there are other wells in the area that have not been accounted for. But given the overall low level of development near Elba Island, they would likely be at least a mile from the liquefaction site, and if saltwater intrusion was induced by those wells, it would be focused around the high-capacity pumping centers and away from the liquefaction site. Therefore, we conclude the project would not result in a cumulative increase in the potential for additional salt water intrusion in the area.

C. Introduction of Invasive Species through Ballast Water Discharges

85. Several commenters, including the SELC and three individuals, express concern about the potential for foreign vessels to transport and release invasive species into the Savannah River through increased ballast water discharges. In addition, the NPS states that the project will introduce exotic species at Fort Pulaski National Park. The EA explains that LNG carriers will be required to adhere to the U.S. Coast Guard 2012 rules⁸² for eliminating various sizes and concentrations of organisms in discharged ballast

⁸⁰ *Id.* at 2-18.

⁸¹ USGS, *Groundwater Monitoring: Database Searches*, <http://ga.water.usgs.gov/about/inforequest-gw.html>.

⁸² 77 Fed. Reg. 17,254 (Mar. 23, 2012).

water. The Coast Guard's rules require foreign vessels, such as LNG carriers, to either exchange ballast water beyond the Exclusion Economic Zone and at least 200 nautical miles from any shoreline, utilize an approved ballast water management system to remove invasives and organisms, or discharge ballast water to an approved water treatment facility.

86. The EA acknowledges that the project would involve the discharge of ballast water, which would have impacts on the Savannah River due to invasive species introduction and water quality impacts, even with federal controls.⁸³ The Commission recognizes that potential impacts from ballast water releases and biofouling could include impacts on water quality and aquatic populations from low dissolved oxygen levels from ballast water releases and potential contamination from ships originating from other countries. The Companies do not own the foreign-flagged LNG carriers visiting the terminal or control mitigation measures occurring at the port of origin. However, the currently-required measures for all ships entering U.S. waters, including offshore ballast water exchange, provide best management practices to minimize risks from invasive species and contamination from non-U.S. ports. The EA states that new rules and discharge standards approved by the Coast Guard will further minimize the introduction and establishment of nonindigenous species.

87. Any LNG vessel that may access the terminal will be required to comply with current and future Coast Guard regulations. Given these factors, in addition to the fact that the Port of Savannah does not currently require more stringent standards than the federal ballast water program, the Commission has no grounds to presume that the established regulations are not satisfactory and need further requirements. Therefore, we conclude that ballast water discharges will not have any noticeable, long-term impact on the Savannah River or aquatic resources beyond those that have already occurred within the Savannah River.

D. Protected Species

88. The FWS commented that the EA does not consider project impacts on the northern long-eared bat (*Myotis septentrionalis*), which was listed as a federally threatened species on April 2, 2015. The listing of the northern long-eared bat occurred after our staff's informal consultation began in summer 2013. The Hartwell Compressor Station is the only project facility within the range of the northern long-eared bat. No

⁸³ EA at 2-21 to 2-22 and 2-26 to 2-27.

northern long-eared bat hibernacula, maternity roost trees, or other occurrences are known to occur within three miles of the Hartwell Compressor Station site based on review of GDNR Natural Heritage Program data. Therefore, no impacts are expected on individual northern long-eared bat or their habitat. In addition, the FWS' January 5, 2016 Programmatic Biological Opinion for the final 4(d) rule authorizes incidental take of the northern long-eared bat.

89. Based on the letters received from the FWS on March 2 and 30, 2016, consultation under section 7 of the Endangered Species Act for the project is complete for the federally-listed species under FWS jurisdiction. Therefore, EA recommended condition 18 is no longer needed and we have modified Environmental Condition 19 of this order to only require that section 7 consultation be completed with the NMFS prior to construction.

90. We also received comments from Al Kritter, Zach Paige, and Lisa Goodman that note the studies of potential impacts on two federally endangered species, the Atlantic sturgeon and shortnose sturgeon, were conducted over 10 years ago. They suggest we revisit how these species are faring and how they will be affected by the project. The EA evaluated impacts on these species and documented the results of recent analyses by the NMFS for two nearby projects, the Elba Island LNG Maintenance Dredging Project and the Savannah Harbor Expansion Project, concluding the project may affect, but will not adversely affect these species.⁸⁴ We believe these conclusions remain valid and adequate. However, we note that section 7 Endangered Species Act consultation with NMFS is not yet complete, and Environmental Condition 19 of this order requires that no construction begin at the LNG Terminal until such consultation has been completed.

E. Consistency with Ecological Health Standards

91. The FWS also expressed concerns about the potential risk for soil-bound contaminants at the off-site wareyard to become mobilized and transported off the site to surrounding marsh/wetlands during construction activities, which could have an impact on fish and wildlife resources. In particular, the FWS requests that the soil sampling results be evaluated against the GDNR Environmental Protection Division's ecological health standards⁸⁵ for soil and sediments. The FWS also requests a clear description of

⁸⁴ *Id.* at 2-42 to 2-43

⁸⁵ Environmental Protection Division, *Comparison of Existing Contamination Risk Reduction Standards*, <https://epd.georgia.gov/comparison-existing-contamination-risk->

(continued ...)

how stormwater runoff originating from the subject parcel will be handled, collected, and/or discharged in order to evaluate risk to adjacent waterbodies.

92. The EA evaluated impacts on soils due to construction of the project, and the Companies will comply with the requirements in our *Upland Erosion Control, Revegetation, and Maintenance Plan* and the project-specific Stormwater Pollution Prevention Plan to meet the Georgia National Pollutant Discharge Elimination System stormwater discharge requirements.⁸⁶ These efforts will include minimizing the area and duration of soil exposure; protecting critical areas during construction by redirecting the velocity of runoff; installing and maintaining erosion and sediment control measures during construction; re-establishing vegetation where practicable as soon as possible following construction; and inspecting the facility boundaries and erosion and sediment controls until final stabilization is achieved in areas requiring revegetation.

93. Based on the Companies' stormwater discharge control measures, we believe the risk for soils and sediments to be mobilized from the off-site wareyard is unlikely to significantly impact fish and wildlife resources. However, we acknowledge that sampling of soils, as the FWS requests, could provide additional information about potential contaminants present at the site. Therefore, we have included Environmental Condition 20 in this order, which ensures that this assessment is completed prior to use of the off-site wareyard.

F. Trucking Impacts on Savannah and Designated Historic Areas

94. Al Kritter, Zach Paige, and Lisa Goodman expressed concern regarding the construction and operational traffic impacts on existing traffic and infrastructure in Savannah. In response, the Companies filed comments on March 7, 2016, stating that they had updated their traffic analysis and reduced the estimated maximum volume of construction trucks per month from 10,000 to 6,200, with an average of 5,000 trucks per month for the first six months of construction and 1,500 trucks or less per month for the remainder of construction. The Companies noted these estimates assume a worst-case scenario where aggregate fill is delivered by truck, rather than by barge. In comments provided on March 14, 2016, the Companies clarified that the trucks hauling aggregate

[reduction-standards-391-3-19-07](#).

⁸⁶ EA at 2-12.

fill will account for approximately 73 percent of all the trucks estimated during the first six months of construction and 39 percent during the remainder of construction.

95. Based on these revised trucking estimates, up to 258 trucks per day, or an average of 208 trucks per day,⁸⁷ could be moving equipment or materials through Savannah during the first six months of construction, tapering to about 62 trucks per day thereafter, which is much less than the maximum of 670 trucks per day estimated in the EA.⁸⁸ Although fewer trucks are now planned than the EA estimated, this additional traffic will likely impact local traffic patterns and increase traffic congestion if not mitigated, although the impacts will be temporary and short-term during the period of construction.

96. In order to reduce the potential for impacts, the Companies have committed to either barge-in the aggregate material or use one of two designated truck routes through Savannah. Delivery by barge could reduce the estimated maximum volume of truck traffic by up to 73 percent during the first six months of construction and 39 percent thereafter. Further, by using existing truck routes, which are roadways designed for oversize or heavier weights, impacts on existing infrastructure is not anticipated. In addition, the Companies will continue to work with the construction contractor, City of Savannah, Chatham County, and local law enforcement to minimize impacts from trucking on area roadways and residents. Based on these measures, we conclude construction traffic impacts will be temporary and short-term, and minimized to the extent practical.

97. The Companies commented that, during operations, deliveries of hazardous materials will be less than the frequency of up to two trucks per day as reported in the EA.⁸⁹ Rather, the Companies clarified that those deliveries will be closer to six trucks per month assuming all 10 Moveable Modular Liquefaction System units are operating. Considering the existing traffic volumes in Savannah around the existing LNG Terminal, the impacts of additional volumes of traffic are cumulatively minor and not likely to affect any infrastructure or increase traffic congestion.

⁸⁷ This estimate assumes 24 work days per month

⁸⁸ EA at 2-59.

⁸⁹ *Id.* at 1-7.

98. The SELC commented that the Companies' proposed use of East Bay Street would have a negative impact on the historical setting associated with Savannah's National Register of Historic Places Historic District and National Historic Landmark due to increased noise, dust, and vibration. East Bay Street, which passes through the Historic District, is a component of one of three alternative trucking routes the Companies originally identified for trucking through Savannah, as reported in the EA.⁹⁰ As mitigation, the SELC recommends that the majority of aggregate fill necessary for the project be delivered by barges or other boats to the maximum extent practicable, and that the remaining truck traffic should use one of the other two alternate routes that do not travel through the Savannah Historic District. In response to these concerns, in a March 14, 2016 filing, the Companies committed to either barge-in the aggregate fill or to use one of the two alternate trucking routes discussed in the EA. In order to verify which truck route is adopted or whether the Companies will use barges for transporting the aggregate fill, we have included new Environmental Condition 21 in this order.

G. Impacts on Fort Pulaski National Park and Nearby Sites

99. The NPS expressed concerns that the project would increase light pollution and industrial noise and degrade park scenery affecting the wilderness experience and visitor experiences at Fort Pulaski National Monument (Fort Pulaski). In addition, the NPS stated that the EA inadequately addresses the potential for the project to cause water pollution, shoreline erosion at Fort Pulaski and nearby sites, including Fort James Jackson and Battery Hamilton on Bird's Island. The NPS also commented that the EA does not evaluate impacts on the Fort Pulaski National Marine Protected Area (MPA).

100. Regarding the NPS concern about increased light pollution, we acknowledged in the EA⁹¹ that additional lighting will be installed for operation of the liquefaction facilities. The NPS recommended we expand our recommended condition, which requires the development of a visual screening plan to include additional mitigation to reduce nighttime light pollution and more comprehensive mitigation to employ lights that use moderate brightness and a warmer color spectrum. In particular, the NPS recommended that mitigation include: use of full cut-off lighting fixtures; use of lighting at 3000 Kelvin color or less; directing lighting away from Fort Pulaski and proposed

⁹⁰ *Id.* at 2-59.

⁹¹ *Id.* at 2-53.

wilderness areas; retrofit of the existing facility lighting; and analysis as a cumulative effect.

101. While we recognize the NPS is working to limit light pollution within its parks and encouraging surrounding communities and businesses to do the same, we agree with the conclusions of the EA that project impacts on Fort Pulaski due to lighting will be negligible and adequately minimized.

102. The NPS also provided comments regarding operational noise impacts on Fort Pulaski. Among other comments, the NPS requested that we consider the entirety of Fort Pulaski as a noise-sensitive area (NSA) rather than just the terminus of McQueen's Island Trail on the basis of the proposed wilderness designation and the potential noise impacts on the variety of wildlife in the park. As detailed in our regulations, staff typically considers NSAs to include populated areas such as residences, schools, and hospitals; staff also considers recreational areas as NSAs on a project-specific basis. For this reason, and in consideration of the NPS' comments during project scoping, the EA evaluates the noise impacts from construction and operation of the project at different locations within the park. The EA recommends consideration of the terminus of McQueen's Island Trail as an NSA because, of the locations evaluated in the EA, park visitors would most likely frequent this location. The EA concludes that, as noise naturally attenuates with distance, the more frequented portions of Fort Pulaski will be protected from noise impacts if our noise requirements are met at the terminus to McQueen's Island Trail. As discussed in the EA, staff further recommended that the terminus of McQueen's Island Trail be included in the post-construction noise survey for the LNG Terminal to confirm that park visitors to this nearest location to the LNG Terminal would not be adversely impacted by operational noise. We agree with staff's evaluation and include this as a requirement in Environmental Condition 28.

103. The NPS expressed concern about the maximum unattenuated construction and operational noise levels that are predicted in the EA⁹² to occur at the western park boundary, which is about five miles closer to the LNG Terminal than the main park facilities and visitor center. The NPS also expressed concerns about noise impacts on wildlife and wilderness, state they consider managing to 55 A-weighted decibels (dBA) as insufficient and insufficiently supported, and recommend additional analysis and mitigation to mitigate the predicted increase in noise. The NPS is correct in stating that our regulations allow for project- and resource-specific consideration to justify

⁹² *Id.* at 2-92.

modification of the 55 dBA day-night average noise level (L_{dn}) criteria or application of our noise criteria on wildlife. For example, in other cases we have evaluated compressor station noise levels on sage grouse (a state-listed species of concern) and sage grouse leks in response to state agency and Bureau of Land Management concerns.⁹³ In these cases, the state agency and/or the Bureau of Land Management has provided specific parameters such as distance and noise levels to include in the evaluation of noise impacts on this wildlife species. We have also included requirements that applicants not exceed certain noise limits to minimize compressor station operational noise on sage grouse leks, as far as prescribing that noise levels from a compressor station not exceed our noise criteria at the station property line.

104. For this project, the NPS, the FWS, and the GDNR have not identified any species of concern or recommended any specific noise levels. It would not be practicable to evaluate noise impacts on such a wide variety of wildlife that may or may not be within the park boundary and are at unidentified distances from the LNG Terminal. Therefore, modification to our noise criteria is not justified for the project. This is partly due to our consideration of the terminus of McQueen's Island Trail as an NSA, even though it is well distant from the more populated areas of the park. It is also due to the fact the existing LNG Terminal has been previously authorized, is currently in operation, and is currently considered to be in compliance with applicable noise standards. In addition, the waters surrounding Fort Pulaski are already extensively used for both recreation and commercial purposes. The park has not been officially designated as wilderness, and thus is not subject to more rigorous noise standards. Therefore, we do not agree that a complete review of potential noise impacts should consider the entirety of Fort Pulaski as a NSA.

105. We note that the predicted noise impacts in the EA⁹⁴ are prior to any noise attenuation measures to be implemented by the Companies to meet the 55 dBA L_{dn} criteria at nearby NSAs, and we find Environmental Conditions 23 and 24 in this order provide sufficient requirements for additional analysis and mitigation to meet our noise limits. Therefore, we do not adopt the NPS recommendations for any additional analysis or mitigation requirements.

106. The NPS expressed concern that ship traffic and dredging within the South Channel of the Savannah River would cause increased shoreline erosion along the north

⁹³ See EA for Meeker to Cheyenne Expansion Project (Docket No. CP09-58-000).

⁹⁴ EA at 2-85 through 2-92.

shore of Cockspur Island, impacting the North Pier and archaeological resources. In addition, the NPS is concerned with the potential for increased erosion to impact Battery Hamilton on Bird's Island near the South Channel and McQueen's Island Trail. The EA⁹⁵ states that operations of the project will not result in any change in the number of ships that service the LNG Terminal. In addition, in a letter to the Commission dated March 24, 2016, the Companies clarified that if barging occurs during construction, it will be on the Savannah River upstream of the areas identified by the NPS. Therefore, we conclude that the project will not increase erosion over the existing conditions.

107. The dredging in the South Channel will be upstream of Elba Island Road Bridge, which is approximately 2.5 miles upstream of Battery Hamilton and the McQueen's Island Trail. As described in the EA,⁹⁶ dredging will be a localized and temporary activity and is expected to result in only minor and temporary increases in suspended sediment concentrations that will not exceed concentrations commonly observed in the Savannah River following storm events. Therefore, we conclude dredging will not likely cause sedimentation or noticeable water quality impacts at Battery Hamilton or to the McQueen's Island Trail.

108. The NPS noted that Fort Pulaski became an MPA in 2012 and NPS requested analysis of project impacts on the MPA. The NPS requested that we consider requiring the Companies to undertake mitigation actions, such as land conservation easements or the purchase of wetland bank units, near the park to limit development and help protect natural marine resources in the area. However, the MPA designation does not establish new regulatory authority or change existing regulations or park management. The MPA has been established to enhance public recognition of ocean and coastal parks, including the valuable natural, cultural, and historic resources of Fort Pulaski National Monument, and to increase cooperation with state and federal partners and the public in order to enhance stewardship in the waters of the United States.⁹⁷ The NPS noted that the system of MPAs was created by Executive Order 2000 and that it calls on federal agencies to "avoid causing harm to MPAs federally conducted, approved, or funded activities." The EA did not consider direct impacts on the Fort Pulaski MPA; however, the EA and this order do evaluate impacts on Fort Pulaski, marine fisheries, tourism, recreation, and cultural resources, and no significant impacts are identified.⁹⁸ Therefore, we conclude

⁹⁵ *Id.* at 2-137.

⁹⁶ *Id.* at 2-25.

⁹⁷ NPS, Fort Pulaski Nominated for Inclusion in the National System of Marine Protected Areas (Jan. 2012, https://www.nps.gov/fopu/learn/news/fopu_nma_2012.htm).

that no impacts on the MPA will occur and that no additional mitigation is warranted.

H. Coastal Zone Consistency

109. Subsequent to the issuance of the EA, we received a letter from the GDNR dated March 7, 2016, stating that the project activities are consistent with the GDNR Coastal Management Program. In addition, we received a letter from the SCDHEC dated March 3, 2016, stating that a Coastal Zone Consistency Certification from SCDHEC's Office of Coastal Resource Management is required for the proposed modifications to the Del Webb Compressor/Metering Station and natural gas lines located in South Carolina. Further, the SCDHEC stated that the Office of Coastal Resource Management possesses the authority to review Federal permits and licenses in and outside of the South Carolina Coastal Zone (eight Coastal Counties) pursuant to 15 C.F.R. Part 930 Subpart D. In a filing dated April 29, 2016, Elba Express provided documentation from the SCDHEC of the Coastal Zone Consistency Certification for the project facilities in South Carolina. Therefore, recommended Condition 20 in the EA is not included in this order.

I. Impacts on South Carolina

110. The SELC stated that the EA fails to consider the impacts of the project on South Carolina, which shares a border with Georgia along the Savannah River. In response, we note that only one minor project component, the Del Webb Meter Station modifications, will be located in South Carolina, and to the extent environmental issues were identified in South Carolina, they were evaluated in the EA. The EA documented land requirements, applicable regulatory requirements, and provided an analysis of the existing setting and environmental impacts at the Del Webb Meter Station.⁹⁹ To the extent resources shared by Georgia and South Carolina, such as the Savannah River, are impacted, the EA analysis of impacts and mitigation measures will not change by noting the resources are common to each state. The South Carolina Coastal Conservation League did not identify any specific concerns during project scoping and has not identified any specific issues that were not evaluated in the EA. Therefore, we conclude that the project will not have any additional impacts on South Carolina beyond what is analyzed in the EA.

⁹⁸ EA at 2-48, 2-52, 2-63, 2-82, and 2-85 through 2-92; 2-23 through 2-27; 2-57; 2-48 through 2-49; and 2-62 through 2-63, respectively.

⁹⁹ *Id.* at 1-28, 1-30, and 2-1.

J. Stormwater and Dredging Management

111. The SELC expressed concern about the potential for stormwater impacts on the Savannah River and stated that current project plans allow the discharge of stormwater without treatment. The SELC also commented that the EA does not adequately consider the potential for stormwater to discharge pollution into the Savannah River, the risk of a spill, or mitigation plans to limit stormwater pollution. The Companies' plans to control stormwater were described throughout the EA and included modification of the existing stormwater control systems on Elba Island for the existing LNG Terminal and development of a project-specific Stormwater Pollution Prevention Plan; development of a Spill Prevention, Control, and Countermeasure Plan; applicable review and regulatory approvals from the GDNR; and compliance with our *Wetland and Waterbody Construction and Mitigation Procedures*.¹⁰⁰ Therefore, we conclude that the Companies will adequately manage stormwater and that the project will not have a significant impact on the Savannah River.

112. The SELC also expressed concern about the potential for dredging in the South Channel to reintroduce heavy metals and other pollutants into the water column, and stated that the EA must further address how dredge spoils will be handled, including measures to prevent the discharge of pollutants via stormwater. The EA thoroughly described the scope and duration of the Companies' plans for dredging and dredge material disposal.¹⁰¹ The Companies' plans for initial dredging are limited in scope and duration to approximately 7.5 acres over a time period less than 2 weeks, its maintenance dredging will occur as needed during construction, and it has no dredging requirements for operations. As stated in the EA, the Companies will deposit the dredged material directly into the existing Elba Island Dredge Material Containment Areas and they will manage the material as specified in the facility's Dredged Material Maintenance Plan.

113. During project planning, the Companies conducted a Tier 1 sediment analysis that documented several heavy metals in the sampled sediment,¹⁰² and the EA acknowledged that dredging could release contaminants from the sediments that could affect water quality and aquatic organisms.¹⁰³ However, due to the short duration of dredging and the

¹⁰⁰ *Id.* at 1-8, 1-13, 1-19, 1-20, 1-30, 2-14, 2-19, and 2-20

¹⁰¹ *Id.* at 1-8, 1-9, and 1-21.

¹⁰² *Id.* at 2-25.

¹⁰³ *Id.* at 2-24.

limited area proposed for dredging, which is in a location outside of the primary flow of the Savannah River, we conclude that any release of contaminants or impacts from a release will be minor. Further, we note that the GDNR issued its Section 401 Water Quality Certification for the proposed liquefaction facilities, including the dredging activities, on December 1, 2014. In addition, as part of our staff's review, the EA included an Essential Fish Habitat Assessment and our staff consulted with the NMFS concerning the project, including the proposed dredging impacts on aquatic resources. Although the NMFS has not yet concurred with our determinations for federally listed species under its jurisdiction, we note that Environmental Conditions 18 and 19 prohibit the Companies from starting construction until consultation is completed with the NMFS. Based on these measures, we find the impacts from dredging were thoroughly analyzed in the EA and that these impacts will be temporary and minor.

K. Geology

114. The Companies requested that we revise EA recommended Environmental Condition 16 to clarify that this condition only applies to the Elba Liquefaction Project and not to the Elba Express Modification Project. The requirement for a special inspector for seismic review is consistent with Section 6 of National Bureau of Standards Information Report 84-2833, and we require this for all LNG projects in higher seismic regions. The Elba LNG Terminal is considered to be in a higher seismic region. Therefore, we have modified the recommended measure as Environmental Condition 17 of this Order to clarify that only the LNG facilities proposed by ELC and Southern LNG at the existing terminal site are subject to seismic review.

115. Stacey Kronquest stated that, while the storm surge wall would protect the facility from a Category 3 hurricane, the EA does not address a Category 4 or 5 hurricane. The storm surge wall preliminary design is discussed in the EA.¹⁰⁴ As discussed in the EA, the proposed wall would resist a storm surge predicted at the site based on a 500-year return period and a Category 3 hurricane directly hitting the site during high tide. Category 4 and Category 5 storms could possibly overtop the storm surge wall in certain conditions, depending on where and when the hurricane made landfall. However, because of the relative unlikelihood of these Category 4 and 5 storms occurring at the terminal, we have not required the Companies to design the storm surge wall for anything greater than a Category 3 storm.

L. Cumulative Impacts

¹⁰⁴ *Id.* at 2-9.

116. The SELC commented that the EA's cumulative impacts analysis failed to consider the Jasper Port facility, which is more formally known as the Jasper Ocean Terminal (JOT) Project. The SELC noted the JOT Project is undergoing an environmental review and may have cumulative impacts on the Savannah River, such as potential increased barge traffic and impacts on the security measures required for the LNG facilities and LNG vessels. The JOT Project is still in the early stages of planning for development.¹⁰⁵ The Georgia and South Carolina Port Authorities signed a joint venture agreement in November 2015, which governs the permitting and planning process for the JOT Project, including the development of terminal design and supporting infrastructure, plans for financing, and execution of the operational decisions required during the permitting process.¹⁰⁶ More recently, in March 2016, the South Carolina Port Authority issued a request for qualifications to identify third party contractors to prepare the environmental impact statement (EIS).

117. As currently envisioned, the JOT Project would be located directly across from Elba Island on a 1,500-acre site on the South Carolina side of the Savannah River in Jasper County near the Tybee National Wildlife Refuge. The facility is estimated to cost \$4.5 billion and take up to eight years prior to commencing construction and 10 years before it is operational.¹⁰⁷ Due to the early stage of planning and the projected timeline, there is no potential for the JOT Project to overlap construction of the LNG Terminal facilities. Therefore, we have determined that this planned project would not result in any cumulative impacts in terms of construction air emissions, barge traffic on the Savannah River, dredging, socioeconomics, or other construction-related impacts.

118. Operation of the project facilities may affect the design and operations of the JOT Project due to its location directly across the Savannah River from the LNG Terminal. The operation of the JOT facility will likely add to congestion of the Savannah River where the LNG Carriers and other ships and watercraft are authorized, and will likely

¹⁰⁵ Georgia Ports Authority, www.gaports.com and South Carolina Ports, www.scspa.com.

¹⁰⁶ WTOC, www.wtoc.com and World Maritime News, <http://worldmaritimenews.com>.

¹⁰⁷ Hilton Head Monthly, *Steady Progress Continues for future Jasper Ocean Terminal Plans* (Jan. 2016), <http://www.hiltonheadmonthly.com/news/hilton-head/3101-steady-progress-continues-for-future-jasper-ocean-terminal-plans>.

increase noise and air quality emissions, light pollution, and impacts on forest land, wetlands, essential fish habitat, sensitive species, wildlife habitat, water quality, land use, recreation, and various other resources in the area. It would be speculative for us to quantify these impacts based on what is currently known about the JOT facility. However, it is reasonable to assume there will be impacts in addition to the Elba Liquefaction Project that the U.S. Army Corps of Engineers (Corps) will need to evaluate in the forthcoming JOT Project EIS. In addition, ships using the JOT facility may be restricted for safety and security reasons when a LNG carrier is berthed at the LNG Terminal, or when a LNG Carrier is departing the LNG Terminal with a load of LNG. However, the number of ships servicing the LNG Terminal will not change from the number of vessels which are currently authorized. Therefore, the authorities considering approval of the planned JOT facility will need to consider and possibly modify the operational plans in order to avoid or minimize impact on the authorized operations of the LNG Terminal, as the existing facility, and not vice versa. The Corps would need to evaluate the cumulative impacts of the JOT facility on shipping in the Savannah River and whether any mitigative measures are warranted to reduce these impacts.

119. Al Kritter stated that it was improper for the EA to determine¹⁰⁸ that the proposed project, including the proposed dredge material disposal at the Dredge Materials Containment Areas and the Savannah Harbor Expansion Project (SHEP), are close enough to have overlapping construction-related air quality impacts. While we recognize that the EA provides a conservative estimate, and that any overlapping impacts will depend on the actual timing and location of each project's activities relative to each other, we agree with the EA's determination that these projects are sufficiently close to each other in terms of geography and potentially timing to consider that the air quality impacts could in fact be additive.

120. Mr. Kritter also stated that the EA should analyze the cumulative impacts of the project on public and private lands, such as increased deterioration of local and secondary roadways due to the repetitive high axle load truck traffic. The impacts of the project and other projects on roadways was evaluated in the EA,¹⁰⁹ but was primarily focused on impacts on residents and others who may be using the roadways at the same time as the proposed project. Impacts on roadway infrastructure is not considered possible or even necessary to evaluate, because the Companies propose to use existing truck routes that are designated by the State of Georgia. These existing truck routes are presumably

¹⁰⁸ EA at 2-141.

¹⁰⁹ *Id.* at 2-140 and 2-58 to 2-60.

designed to tolerate truck uses and the proposed project truck traffic will not exceed the design capacity in terms of volume. In the event the Companies need to use the designated truck routes for delivery of loads that require trucks that are longer or heavier than the road design standards, the delivery will be evaluated by the state on a case by case basis and final routing will be based on the load transported. Further, use of the roadways and impacts from other trucks cannot be estimated or predicted, and it is not possible to attribute impacts on a roadway to any single vehicle or user of a public roadway. Therefore, no significant cumulative impacts on existing roadways infrastructure is anticipated.

121. Mr. Kritter also commented that the analysis of the SHEP should consider cumulative impacts associated with dredging, saltwater intrusion, water displacement, decreased dissolved oxygen, loss of wetlands, destruction of spawning habitat, and the introduction of invasive species through ballast of the larger post-Panamax ships. There is a substantial difference in scale of impacts between the two projects. The SHEP dredging of approximately 40 miles of the Savannah River channel, and the associated impacts of that activity (e.g., decreased dissolved oxygen levels, increased turbidity, wetland impacts, habitat impacts), essentially dwarf any potential impacts from the proposed project's activities (i.e., approximately 7.5 acres dredged over 2 weeks, 0.3 acre of mitigated tidal marsh loss). Therefore, the EA concludes, and we agree, that the proposed project will not result in measureable or significant cumulative impacts. We discuss above that the project is not expected to contribute to additional salt water intrusion or increase shipping (and associated water displacement) or the potential for introduction of invasive species, and the EA concludes¹¹⁰ the project will not affect any essential fish or spawning habitats. Therefore, there are no cumulative impacts and no additional analysis for these factors is necessary.

122. Three commenters, Al Kritter, Zach Paige, and Lisa Goodman, stated that the impacts of the Palmetto Pipeline should be analyzed cumulatively with those of the Elba Express Modification Project. The Palmetto Pipeline Project consisted of a new 360-mile-long refined petroleum products pipeline planned by Kinder Morgan in South Carolina, Georgia, and Florida. The proposed route would have extended from near Belton, South Carolina to Jacksonville, Florida, including facilities in Effingham and Chatham Counties, Georgia, where portions of the proposed project are located. Kinder Morgan originally planned for construction to begin in 2016, with facilities in service in 2017. Based on the common timelines and geography, it is likely that some

¹¹⁰ *Id.* at 2-28 to 2-33.

cumulative impacts could have occurred from both the proposed Elba Express Modification and Palmetto Pipeline Projects had they both been constructed according to these timeframes. However, Kinder Morgan has suspended its work on the Palmetto Pipeline Project indefinitely. Therefore, we do not consider the construction of the Palmetto Pipeline Project to be reasonably foreseeable, and no additional cumulative impact analysis of this project is necessary.

M. Public Safety

123. We received several comments expressing concern about the lack of information provided on the Companies' Emergency Response Plan (ERP), and the lack of public availability for review. We also received a comment questioning the timing of when an updated ERP would be provided, which the EA recommended as prior to initial site preparations.

124. Environmental Condition 37 of this order requires ELC and Southern LNG to update their ERP prior to initial site preparation. On March 7, 2016, ELC and Southern LNG filed supplemental responses stating that meetings were held with local emergency responders and local communities on project updates, potential impacts on the community, hazard analysis results, and construction/operation traffic for the proposed project. ELC and Southern LNG also stated that the existing ERP will be updated in conjunction with input from local emergency responders. Environmental Condition 37 has been revised to ensure ELC and Southern LNG continue consultation and coordination with all incident response organizations or personnel responsible for emergency response-related actions at the site. In addition, we have revised this condition to require that certain portions of the ERP be filed publicly, including public notification and evacuation. With regards to the timing of when ELC and Southern LNG will provide an updated ERP, the Energy Policy Act of 2005 directs the Commission to require an LNG terminal operator to develop an ERP, including a cost-sharing plan, in consultation with the Coast Guard and state and local agencies prior to our approval to begin construction. Therefore, as stated in Environmental Condition 37, the updated ERP will be required prior to initial site preparation.

125. We received comments stating that the marine traffic in the Port of Savannah has increased since the final EIS was issued for the Elba III Expansion Project (FERC Docket No. CP06-470-000); therefore, a Waterway Suitability Assessment (WSA) which addresses the risks associated with LNG marine traffic and Zones of Concern should be provided. As stated in the EA,¹¹¹ in a letter dated September 11, 2012, the

¹¹¹ EA at 2-95.

Coast Guard determined that since the proposed project would not alter the marine transfer area in a way that would result in an increased capacity beyond the existing WSA (i.e., 160 vessels per year), ELC and Southern LNG are not required to submit a new Letter of Intent or WSR. In addition, the final EIS for the Elba III Expansion Project addressed the WSA currently in place and included the Zones of Concern for 266,000 cubic meter LNG vessels.¹¹² The Coast Guard stated that prior to engaging in the proposed operations, ELC and Southern LNG must provide details of how the proposed modifications would meet or exceed the requirements in 33 C.F.R. Parts 127.101, 127.305, and 127.307, and 105.300 to the satisfaction of the Captain of the Port (COTP). Any changes to these proposed modifications would require notification to the COTP and the COTP would determine whether ELC and Southern LNG are required to complete a new Letter of Recommendation or WSA.

126. Several commenters asserted that the semi-annual operating reports; ERP; grading plans; hazard modeling, including worst-case scenarios; and the Terracon geotechnical report should be made public. Requests for Critical Energy Infrastructure Information (CEII) treatment and privileged treatment for documents submitted to the Commission are prescribed in 18 C.F.R. Part 388. A company requesting that material be treated as CEII or privileged information must include in its filing a justification for such treatment in accordance with the filing procedures posted on the Commission's website. Information in semi-annual operating reports, grading plans, and geotechnical reports may be filed with the Commission as CEII or privileged information because these documents contain specific engineering and detailed design information. Some sections of the ERP and the hazard analysis may be filed as CEII or as privileged information. However, the hazard modeling analysis and results are discussed in the EA,¹¹³ and as mentioned above, Environmental Condition 37 of this order specifies that information pertaining to items such as procedures for public notification and evacuation shall be filed publicly.

127. We received several comments requesting quantification of the flammable refrigerants that would be trucked to the facility. The Companies' transportation of hazardous materials by truck must comply with the federal, state, and local laws, ordinances, and regulations. The federal requirements for the transportation of hazardous materials by truck are contained within the DOT's regulations in 49 C.F.R.

¹¹² Elba III Expansion Project, Docket Number CP06-470-000, Final Environmental Impact Statement, section 4.12.4.3.

¹¹³ EA at 2-119.

Parts 100-199 and 300-399. Within the DOT, the PHMSA and the Federal Motor Carrier Safety Administration (FMCSA) are charged with administering the safety aspects of hazardous materials transportation for trucking. The PHMSA establishes requirements for packaging, labeling, emergency response, and security for the transportation of hazardous materials in the United States. The PHMSA's Emergency Response Guidebook is often used by fire fighters, police, and other emergency service personnel who may be the first to arrive at the scene of a transportation incident involving hazardous materials. The most recent Emergency Response Guidebook recommends that in the event of a truck fire, first responder(s) isolate the area for 1,600 meters (1 mile) in all directions. Although a 1-mile evacuation is suggested, it may not necessarily represent the potential hazard for the given situation. Proper evaluation of the circumstances would be determined by the first responder(s) regarding the potential hazard and most effective emergency response.

128. The FMSCA establishes driver licensing and qualification requirements and standards for routing either by the motor carrier or by a state. The truck routing is governed by 49 C.F.R. Part 397 and the state, and restrictions on refrigerant trucking in Savannah, Georgia have not been established, in accordance with Section 46-11-4 of the Georgia Department of Public Safety Transportation Rulebook. The Georgia Department of Public Safety may, however, require changes to the proposed dates, times, and routes during transport as necessary to maximize protection of the public health, safety, welfare, or the environment. Title 49 C.F.R 397 also prescribes that if a state or its political subdivision chooses to establish a routing designation, the state must make a finding, supported by a risk analysis, that the routing designation enhances public safety.

129. Commenters also expressed concern regarding the proximity of neighborhoods and schools to the Elba Island LNG Terminal facility and that the worst case and catastrophic event within the terminal was not considered and analyzed in the EA. In addition, a commenter stated that impacts from a potential fire or explosion hazard would extend farther than what was presented in the EA. Design spills to be used in siting calculations are governed by the DOT's regulations for LNG facilities in 49 C.F.R. Part 193. As discussed in the EA,¹¹⁴ the design spills used to set the consequence distances were developed by ELC and Southern LNG in consultation with the DOT.

130. ELC and Southern LNG reviewed over 500 piping segments, including LNG and other hazardous fluid piping segments, using failure frequency criteria adopted by the

¹¹⁴ *Id.* at 2-121.

DOT. For the design spills determined from this review, ELC and Southern LNG modeled vapor dispersion from flammable and toxic releases, radiant heat from fires, and overpressure effects from vapor cloud explosions. The hazard modeling analysis and results discussed in the EA addressed the design spills that produce the highest release rates and longest ½-lower flammability limit vapor clouds. While the final determination on whether this facility complies with Part 193 will be made by the DOT, Commission staff reviewed these calculations in order to estimate whether there would be an impact on public safety from these spills. We agree with the EA's finding that there would not be a significant public safety impact resulting from the project. In addition to the hazard analysis, 49 C.F.R. § 193.2509 specifies that the facility ERP should determine and adequately handle different types of emergencies that may be expected to occur at the facility, including catastrophic failure of an LNG storage tank. Environmental Condition 37 will ensure that ELC and Southern LNG continue consultation and coordination with all incident response organizations or personnel responsible for emergency response-related actions at the site and certain portions of the ERP will be filed publicly, including information related to public notification and evacuation.

131. Mr. Kritter expressed concern regarding safety effects of the SHEP, which upon completion will allow the Port of Savannah to accommodate larger cargo vessels, on ships docked at the Elba LNG facilities. Mr. Kritter referenced a 2006 incident which involved a passing ship failing to operate at a safe speed, causing a surge to occur while an LNG vessel was moored at the Elba docking facilities. As a result of this incident, the Coast Guard issued a Regulated Navigation Area (RNA) Interim Rule in 33 C.F.R. § 165.756 for LNG operations on the Savannah River. The RNA includes specific requirements for transiting vessels passing a moored LNG ship in order to prevent a reoccurrence of the 2006 incident. This rule adequately addresses the commenter's concern.

132. ELC and Southern LNG filed a comment requesting that recommended Environmental Condition 59 of the EA be revised to delete the reference to the Safety Instrumented System, because the current design specifies open and close position switches for the emergency shutdown system valves to be hardwired only to the Distributed Control System. We have, therefore, revised Environmental Condition 60 of this order, which now states that the emergency shutdown system valves are to be equipped with open and close position switches connected to the Distributed Control System and/or Safety Instrumented System.

133. ELC and Southern LNG also filed a comment regarding recommended Environmental Condition 90, part (I) of the EA, requesting that the condition be revised to replace "hazardous fluids" with "LNG," since Southern LNG does not have the capability to receive any hazardous fluids other than LNG by water. In addition, ELC and Southern LNG state that the project does not include the installation of facilities

necessary to receive hazardous fluids by a waterborne carrier. We have revised Environmental Condition 92 of this order to accurately reflect all modes of transportation by which hazardous fluids will be transported for the proposed project.

134. ELC and Southern LNG stated that they may require several export cargos during the commissioning period in order to manage inventory during the testing/equipment tuning period, before the facility can safely and reliably perform at the production rates and ultimately be placed in service. Therefore, we have added new Environmental Condition 77 in this order to further clarify that authorization will be required prior to loading of the initial cargo of LNG during commissioning activities. The condition also requires ELC and Southern LNG to file weekly reports to document the commissioning process. We have also added Environmental Condition 12 to this order to clarify that authorization will be required prior to introducing hazardous fluids into the project facilities.

135. The EA concluded that, with the proposed mitigation measures and the recommended environmental conditions that are now included in this order, ELC and Southern LNG's Front End Engineering Design includes acceptable layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could affect the off-site public.¹¹⁵ We agree with this conclusion.

N. Environmental Conclusions

136. Based on the analysis in the EA, as supplemented herein, we conclude that if constructed and operated in accordance with the Companies' application and supplements, and in compliance with the environmental conditions in Appendix B to this order, our approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

137. 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.¹¹⁶

¹¹⁵ *Id.* at 2-137 to 2-138.

¹¹⁶ *See, e.g., Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 243 (D.C. Cir. 2013) (holding state and

(continued ...)

VII. Conclusion

140. The Commission on its own motion received and made a part of the record in this proceeding all evidence, including the applications, supplemented and exhibits thereto, and all comments and upon consideration of the record,

The Commission orders:

(A) ELC and Southern LNG are authorized under section 3 of the NGA to construct, modify and operate the Elba Liquefaction Project at the existing Elba Island terminal located on Elba Island, Chatham County, Georgia, subject to conditions and as more fully described in this order and in its application and supplements.

(B) Elba Express's application for authorization under NGA section 7(c) to construct, operate and maintain the Elba Express Modification Project, as detailed in its application and supplements, is granted as discussed in the body of this order.

(C) Southern LNG is authorized under section 7(b) of the NGA to abandon its LNG Truck Loading facilities at the terminal, as described and discussed in the body of this order.

(D) ELC, Southern LNG, and Elba Express shall comply with the environmental conditions contained in Appendix B to this order.

(E) The construction of the proposed facilities shall be completed and made available for service within five years of the date of issuance of this order.

(F) The authorizations granted herein are conditioned on the applicants' compliance with all applicable regulations under the NGA including, but not limited to, Parts 154 and 284, and paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations.

(G) Elba Express must execute contracts for the volumes and terms represented by the precedent agreements prior to constructing each phase of the Elba Express Modification Project.

local regulation is preempted by the NGA to the extent it conflicts with federal regulation, or would delay the construction and operation of facilities approved by the Commission); and *Iroquois Gas Transmission System, L.P.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

(H) Southern LNG's proposed rates and tariff records are approved, as conditioned in this order.

(I) Southern LNG must make a tariff filing no sooner than 60 days but no later than 30 days prior to commencement of service to place the rates and tariff records approved herein into effect.

(J) Elba Express's currently effective Rate Schedule FTS rate is approved as the initial recourse rate for service utilizing the Elba Express Modification Project. Elba Express's request for a predetermination for rolled-in rate treatment for the costs of the project in its next general NGA section 4 rate proceeding is granted, barring a significant change in circumstances, as discussed in this order.

(K) Elba Express's request to recover fuel costs through Elba Express's fuel tracker mechanism is denied as discussed in the body of the order.

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

(M) The late motions to intervene are granted.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

APPENDIX A

Motions to Intervene

CP14-103-000:

Timely, Unopposed Motions to Intervene

BG LNG Services, LLC
Floridian Natural Gas Storage Company, LLC
Peoples Gas System, a Division of Tampa Electric Company
SCANA Energy Marketing, Inc.
Shell NA LNG LLC
Sierra Club
South Carolina Electric & Gas Company
Southern Company Services, Inc.

Unopposed Motions to Intervene Out of Time

Joseph Bonds
Joellen Cooper-Pyles
Lisa M. Goodman
Micah Goodman
Karen Grainey
Alfred Ritter, Jr.
Stacey Kronquest
Zach Paige
Pipeline Safety Coalition
Katherine A. Scheuering
Jack Simmons
Katherine H. Simmons
Savannah Simmons
Ann A. Welch

CP14-115-000:

Timely, Unopposed Motions to Intervene

BG Energy Merchants, LLC
Effingham County Power, LLC
JEA

Peoples Gas System, a Division of Tampa Electric Company
Shell NA LNG LLC
Sierra Club
South Carolina Electric & Gas Company
Southern Company Services, Inc.

Unopposed Motions to Intervene Out of Time

Joellen Cooper-Pyles
Municipal Gas Authority of Georgia
Pipeline Safety Coalition

APPENDIX B

Environmental Conditions Elba Liquefaction Project Docket Nos. CP14-103-000 and CP14-115-000

As recommended in the environmental assessment (EA), this authorization includes the following conditions:

1. Elba Liquefaction Company, L.L.C. (ELC), Southern LNG Company, L.L.C. (Southern LNG), and Elba Express Company, L.L.C. (Elba Express) (collectively referred to as “Companies”) 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 the Order. The Companies 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 the LNG Terminal, the Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and environment during construction and operation of the project. This authority shall include:
 - a. stop-work authority and authority to cease operation; and
 - b. the design and implementation of any additional measures deemed necessary to assure continued compliance with the intent of the conditions of the Order.
3. For the Elba Express Modification Project, the Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of the Order; and

- b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from the construction and operation of the project.
4. **Prior to any construction**, the Companies shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EI), 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.
5. The authorized facility locations shall be as shown in the EA, as supplemented by filed drawings and plans. **As soon as they are available, and before the start of construction**, the Companies shall file with the Secretary any revised detailed drawings or plans at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these drawings or plans.

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

6. The Companies shall file with the Secretary detailed drawings or plans and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments, facility relocations, staging areas, pipe storage yards, new access roads, and other areas that will be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species will 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/aerial photographs. 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 extra workspace allowed by our *Upland Erosion Control, Revegetation, and Maintenance Plan* and/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 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.
7. **Within 60 days of the acceptance of the authorization and before construction begins**, Elba Express shall file an Implementation Plan for the review and written approval by the Director of OEP. Elba Express must file revisions to the plan as schedules change. The plan shall identify:
- a. how Elba Express 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 the Order;
 - b. how Elba Express 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 for the facility sites, and how Elba Express will ensure that sufficient personnel are available to implement the environmental mitigation;
 - d. Elba Express 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 Elba Express will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses 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 Elba Express's organization having responsibility for compliance;

- g. the procedures (including use of contract penalties) Elba Express 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 on-site personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.
8. **Within 60 days of the acceptance of the authorization and before construction begins**, ELC and Southern LNG shall file an Implementation Plan for the review and written approval by the Director of OEP. ELC and Southern LNG must file revisions to the plan as schedules change. The plan shall identify:
- a. how ELC and Southern LNG will implement the construction procedures and mitigation measures described in their application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
 - b. how ELC and Southern LNG 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 for the facility sites, and how ELC and Southern LNG 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 ELC and Southern LNG will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - f. ELC and Southern LNG personnel (if known) and specific portion of the companies' organizations having responsibility for compliance;

- b. the construction status of the project sites, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - c. a listing of all problems encountered and each instance of noncompliance observed by each EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - d. a 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/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by the Companies from other federal, state, or local permitting agencies concerning instances of noncompliance, and the Companies' response.
11. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, the Companies shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
12. ELC and Southern LNG must receive written authorization from the Director of OEP **prior to introducing hazardous fluids into the 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.
13. ELC and Southern LNG must receive written authorization from the Director of OEP **before placing into service** the LNG Terminal for each phase of the project. Such authorization will only be granted following a determination that the 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 right-of-way and other areas affected by the project are proceeding satisfactorily.
14. Elba Express must receive written authorization from the Director of OEP **before placing into service** each phase of its new project facilities. Such authorization will only be granted following a determination that the 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.

15. **Within 30 days of placing the authorized facilities in service**, the Companies shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the authorization conditions the Companies has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
16. **Prior to construction of the LNG Terminal**, ELC and Southern LNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in Georgia:
 - a. site preparation drawings and specifications prior to construction;
 - b. pile installation drawings and specifications prior to construction;
 - c. LNG liquefaction facility structures and foundation design drawings and calculations (including prefabricated and field-constructed structures) prior to their construction;
 - d. seismic specifications for procured equipment prior to the issuing of requests for quotations; and
 - e. quality control procedures to be used for civil/structural design and construction early in the design phase.
17. ELC and Southern LNG shall employ a special inspector to observe the work performed at the LNG Terminal to ensure the quality and performance of the seismic resisting systems during construction of the liquefaction facilities. A copy of these inspection reports shall be included in the **monthly** status reports filed with the Secretary. The special inspector shall be responsible for:
 - a. observing the construction of the liquefaction facility to be certain it conforms to the design drawings and specifications;
 - b. furnishing inspection reports to the engineer- or architect-of-record, and other designated persons. All discrepancies shall be brought to the immediate

attention of the contractor for correction, then if uncorrected, to the engineer- or architect-of-record; and

- c. submitting a final signed report stating whether the work requiring special inspection was, to the best of his/her knowledge, in conformance with approved plans and specifications and the applicable workmanship provisions.
18. ELC and Southern LNG shall limit in-water pile driving and initial dredging to occur **between May 15 and November 15**. If these activities cannot be conducted within this time window, ELC and Southern LNG must obtain further Commission authorization following additional consultation and approval from the National Marine Fisheries Service and the U.S. Army Corps of Engineers.
 19. ELC and Southern LNG shall not begin construction activities of the LNG Terminal facilities **until**:
 - a. the staff receives comments from the National Marine Fisheries Service regarding the proposed action;
 - b. the staff completes formal Endangered Species Act consultation with the National Marine Fisheries Service, if required; and
 - c. ELC and Southern LNG have received written communication from the Director of OEP that construction or use of mitigation may begin.
 20. **Prior to using the off-site wareyard**, the Companies shall evaluate soil sampling results at the off-site wareyard against the Georgia Department of Natural Resources Environmental Protection Division Environmental Protection Division's ecological health standards, and provide the results to the U.S. Fish and Wildlife Service. The Companies shall file with the Secretary, for the review and written approval by the Director of OEP, the soil sampling results and the agency consultation.
 21. **Prior to construction**, ELC and Southern LNG shall file with the Secretary, for review and written approval of the Director of OEP, its proposed truck route or whether barges will be used to transport aggregate fill.
 22. **Prior to construction**, Elba Express shall file with the Secretary, for the review and written approval by the Director of OEP, a visual screening plan for the new and existing compression facilities that incorporates the specific measures developed in consultation with nearby property owners.
 23. ELC and Southern LNG shall file with the Secretary a full load noise survey for the LNG Terminal **no later than 60 days** after Phase I is placed into service. If a

full load noise survey is not possible, ELC and Southern LNG shall provide an interim survey at the maximum possible load and provide the full load survey **within 6 months**. If the noise attributable to the operation of the equipment at the LNG Terminal under interim or full load conditions exceeds a day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area, ELC and Southern LNG shall reduce operation of the liquefaction facilities or install additional noise controls until a noise level below a day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area is achieved. ELC and Southern LNG shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after they install the additional noise controls.

24. ELC and Southern LNG shall file a full load noise survey with the Secretary **no later than 60 days** after placing the LNG Terminal Phase II facilities into service. If a full load noise survey is not possible, ELC and Southern LNG shall provide an interim survey at the maximum possible load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at the LNG Terminal under interim or full load conditions exceeds an day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area, ELC and Southern LNG shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. ELC and Southern LNG 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.
25. Elba Express shall file a full load noise survey with the Secretary for the Hartwell Compressor Station **no later than 60 days** after the applicable compressor units are placed into service for the first, second, and third phases. If a full load noise survey is not possible, Elba Express shall provide an interim survey at the maximum possible load and provide the full load survey **within 6 months**. If the noise attributable to the operation of the equipment at the Hartwell Compressor Station under interim or full load conditions exceeds an day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area, Elba Express shall reduce operation of the compressor station or install additional noise controls until a noise level below an day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area is achieved. Elba Express 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.
26. For each project phase that adds new or additional compression facilities at the Jefferson and Rincon Compressor Stations, Elba Express shall file full load noise surveys with the Secretary **no later than 60 days** after placing the facilities into service. If full load condition noise surveys are not possible, Elba Express 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 Phase I operation of the Jefferson and Rincon Compressor Stations under interim or full load conditions exceeds a day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area, Elba Express shall reduce operation of the compressor station(s) or install additional noise controls until a noise level below a day-night average sound level of 55 A-weighted decibels at the nearby noise sensitive area is achieved. If the noise attributable to the Phase III operation of all of the equipment at the Jefferson and Rincon Compressor Stations, under interim or full horsepower load conditions, exceeds a day-night average sound level of 55 A-weighted decibels at any nearby noise sensitive areas, Elba Express shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Elba Express 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.

27. **Prior to placing the Hartwell Compressor Station modifications and new Jefferson and Rincon Compressor Stations into service**, Elba Express shall file with the Secretary, for review and written approval by the Director of OEP, a landowner notification plan for planned blowdown events.
28. ELC and Southern LNG shall include the terminus of the McQueen's Island Trail as a noise sensitive area in its full load noise surveys for the LNG Terminal.

Conditions 29 through 89 shall apply to the ELC and Southern LNG Liquefaction Project LNG facilities. Information pertaining to these specific conditions 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.

29. **Prior to initial site preparation**, ELC and Southern LNG shall file an overall project schedule, which includes the proposed stages of the commissioning plan.

30. **Prior to initial site preparation**, ELC and Southern LNG shall provide procedures for controlling access during construction.
31. **Prior to initial site preparation**, ELC and Southern LNG shall file the quality assurance and quality control procedures for construction activities.
32. **Prior to initial site preparation**, ELC and Southern LNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.
33. **Prior to initial site preparation**, ELC and Southern LNG shall file additional analysis that demonstrates the flammable vapor dispersion from design spills will be prevented from dispersing underneath the existing elevated LNG storage tank(s), or the LNG storage tank(s) will be able to withstand an overpressure due to ignition of the flammable vapor dispersion cloud that disperses underneath the existing elevated LNG storage tank(s).
34. **Prior to initial site preparation**, ELC and Southern LNG shall file refined modeling that determines whether additional vapor fencing is needed as a mitigation measure for an LNG release located near the property line adjacent to the Savannah River.
35. **Prior to initial site preparation**, ELC and Southern LNG shall file an analysis that determines whether the existing LNG storage tank D-5 will be able to withstand a peak side-on pressure of 2 pounds per square inch gauge.
36. **Prior to initial site preparation**, ELC and Southern LNG shall file additional layers of protection to mitigate the potential for an initiating event to develop into a boiling-liquid-expanding-vapor explosion incident in the form of passive mitigation.
37. **Prior to initial site preparation**, ELC and Southern LNG shall file an updated Emergency Response Plan (ERP) to include the liquefaction facilities as well as instructions to handle on-site refrigerant-related emergencies. The ERP shall include evidence of consultation and coordination with all incident response organizations or personnel responsible for emergency response, public notification, and shelter-in-place/evacuation actions. Information pertaining to items such as procedures for public notification and evacuation shall be filed publicly. ELC and Southern LNG shall file the updated ERP with the Secretary for review and written approval by the Director of OEP.
38. **Prior to initial site preparation**, ELC and Southern LNG shall file an ERP that includes a Cost-Sharing Plan identifying the mechanisms for funding all project-specific security and emergency management costs that will 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 and emergency management equipment and personnel base.

39. The **final design** shall include information/revisions pertaining to ELC and Southern LNG's response to the Engineering Information Requests identified in table 2.8.4-1 of the EA, which indicated features to be included or considered in the final design.
40. The **final design** shall include change logs that list and explain any changes made from the Front End Engineering Design provided in ELC and Southern LNG's 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.
41. The **final design** shall provide up-to-date process flow diagrams with heat and material balances and piping and instrumentation diagrams, 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 and nozzle schedule;
 - d. valve high pressure side and internal and external vent locations;
 - e. piping with line number, piping class specification, size, and insulation type and thickness;
 - f. piping specification breaks and insulation limits;
 - g. all control and manual valves numbered;
 - h. relief valves with size and set points; and
 - i. drawing revision number and date.
42. The **final design** shall provide piping and instrumentation designs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect the project to the existing facility.
43. The **final design** shall provide piping and instrumentation controls that show hand control valves HCV-3701 and HCV-3801 on the Cold Box piping and instrumentation designs US01-1120-P0037A and US01-1120-P0038A.

44. The **final design** shall provide an up-to-date complete equipment list, process and mechanical data sheets, and specifications.
45. The **final design** shall include three-dimensional plant drawings to confirm plant layout for maintenance, access, egress, and congestion.
46. The **final design** shall include a list of all car-sealed and locked valves consistent with the P&IDs.
47. The **final design** shall specify that the minimum flow set point of the cooling media to MK-0501 be equipped with an alarm that is active during operation of the motor.
48. The **final design** shall include a low instrument air pressure alarm and plant-wide shutdown initiated by low-low instrument air pressure. The setting shall be above the minimum required to maintain stable operation.
49. The **final design** shall demonstrate that for hazardous fluids, piping and piping nipples 2 inches or less in diameter are designed to withstand external loads, including vibrational loads in the vicinity of rotating equipment and operator live loads in areas accessible by operators.
50. The **final design** shall specify that the 150# piping specification, S1Y, downstream of the restriction orifice and pipe break in the 6-inch-diameter LNG rundown piping to the LNG storage tanks, shall be tested to qualify the piping to operate at the specified maximum allowable operating pressure of the piping of 275 pounds per square inch gauge.
51. The **final design** shall specify that piping specifications for stainless steel piping capable of operating at cryogenic temperatures shall require the inner and outer ring of spiral wound gaskets to be stainless steel.
52. The **final design** shall provide the procedures for pressure/leak tests that address the requirements of American Society of Mechanical Engineers VIII and American Society of Mechanical Engineers B31.3, as required by 49 CFR 193.
53. 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 clean-out, dry-out, purging, and tightness testing.
54. The **final design** shall include drawings and details of how process seals or isolations installed at the interface between a flammable fluid system and an

electrical conduit or wiring system meet the requirements of National Fire Protection Association 59A.

55. The **final design** shall provide an air gap or vent installed downstream of process seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that: shall continuously monitor for the presence of a flammable fluid; shall alarm the hazardous condition; and shall shut down the appropriate systems.
56. The **final design** shall provide electrical area classification drawings.
57. 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 recommendations, and actions taken on the recommendations shall be filed.
58. 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 set points.
59. The **final design** shall include a drawing showing the location of emergency shutdown device buttons. Emergency shutdown device buttons shall be easily accessible, conspicuously labeled, and located in an area accessible during an emergency.
60. The **final design** shall specify that all emergency shutdown device valves are to be equipped with open and closed position switches connected to the Distributed Control System and/or Safety Instrumented System.
61. The **final design** shall include the sizing basis and capacity for the final design of the flare stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks.
62. The **final design** shall include an evaluation that confirms remote sensing lines for pilot-operated relief valves are subject to chatter and are required by API 520/521. If sensing lines are used from the main process piping to the pilot relief valves, the sensing lines shall be piping in order to ensure mechanical integrity.
63. The **final design** shall specify that the 1-inch-diameter sensing line from the main process piping shall be equipped with a root valve at the nipple from the main line connection to provide isolation of the system in the event the sensing line is damaged or the needle valve malfunctions.

64. 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 59A (2001), chapter 9.1.2 as required by 49 CFR Part 193. The evaluation shall consider the need for clean agent fire suppression in the new switchgears and motor control centers. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed.
65. The **final design** shall provide spill containment system drawings with dimensions and slopes of curbing, trenches, and impoundments.
66. The **final design** shall provide 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 hazard detection equipment.
67. The **final design** shall include a list of alarm and shutdown set points for all hazard detectors. The set points of the hazard detectors shall account for the calibration gas when determining the lower flammable limit set points for flammable components such as refrigerants, natural gas liquids, and LNG.
68. The **final design** shall include a list of alarm and shutdown set points for all hazard detectors. The set points of the hazard detectors shall account for the calibration gas when determining the set points for toxic components such as ammonia, natural gas liquids, and hydrogen sulfide.
69. The **final design** shall specify that a flammable gas detector with alarm is to be provided to monitor the vent from the seal gas system as shown on piping and instrumentation diagram US01-1120-P0048C.
70. The **final design** shall include flammable gas monitoring and alarm of the vent gas from the heating medium system that flows to the flare system.
71. The **final design** shall provide complete plan drawings and a list of the fixed, wheeled, and 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.
72. The **final design** shall provide facility plans and drawings that show the location of the firewater and foam systems. Drawings shall clearly show: firewater and foam piping; post indicator valves; and the location, and area covered by, each

monitor, hydrant, deluge system, foam system, water-mist system, and sprinkler. The drawings shall also include piping and instrumentation diagrams of the firewater and foam system.

73. ELC and Southern LNG shall certify that the **final design** is consistent with the information provided to the DOT as described in the design spill determination letter dated July 30, 2015 (FERC eLibrary Accession Number 20150731-4001) and supplemental information filed by ELC and SLNG on September 8, 9, 23, and 25, 2015 (FERC eLibrary Accession Numbers 20150908-5298, 20150910-5006, 20150923-5177, and 20150925-5288), October 2 and 19, 2015 (FERC eLibrary Accession Numbers 20151005-5031 and 20151020-5011), and November 30, 2015 (FERC eLibrary Accession Number 20151130-4444). In the event that any modifications to the design alters the candidate design spills on which the Title 49 CFR 193 siting analysis was based, ELC and Southern LNG shall consult with the U.S. Department of Transportation on any actions necessary to comply with Part 193.
74. The **final design** shall include procedures to maintain and inspect the vapor fencing provided to meet the siting provisions of 49 CFR 193.2059.
75. The **final design** shall provide concurrence from the U.S. Department of Transportation as to whether the use of check valves, instead of vapor fencing, in the LNG rundown line is an acceptable form of mitigation.
76. **Prior to commissioning**, ELC and Southern LNG 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. ELC and Southern LNG shall file documentation certifying that each of these milestones has been completed before authorization to commence the next phase of commissioning and startup will be issued.
77. **Prior to loading the first LNG export commissioning cargo**, ELC and Southern LNG shall receive written authorization from the Director of OEP. After the loading of the first cargo, ELC and Southern LNG shall file **weekly** reports on the commissioning of the proposed systems that detail the progress toward demonstrating the facilities can safely and reliably operate at or near the design production rate. The reports shall include a summary of activities, problems encountered, and remedial actions taken. The weekly reports shall also include the latest commissioning schedule, including projected and actual LNG production by each liquefaction train, LNG storage inventories in each storage tank, and the number of anticipated and actual LNG commissioning cargoes, along with the associated volumes loaded or unloaded. Further, the weekly reports shall include a status and list of all planned and completed safety and reliability tests, work

authorizations, and punch list items. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.

78. **Prior to commissioning**, ELC and Southern LNG 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.
79. **Prior to commissioning**, ELC and Southern LNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.
80. **Prior to commissioning**, ELC and Southern LNG shall file updates addressing the liquefaction facilities in the operation and maintenance procedures and manuals as well as in the safety procedures.
81. **Prior to commissioning**, ELC and Southern LNG shall maintain a detailed training log to demonstrate that operating staff have completed the required training.
82. **Prior to commissioning**, ELC and Southern LNG 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.
83. **Prior to introduction of hazardous fluids**, ELC and Southern LNG shall complete all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the Distributed Control System and the Safety Instrumented System to demonstrate full functionality and operability of the system.
84. **Prior to introduction of hazardous fluids**, ELC and Southern LNG shall complete a firewater pump acceptance test and firewater monitor and hydrant coverage test. The actual coverage area from each monitor and hydrant shall be shown on facility plot plan(s).
85. **Prior to commencement of service**, ELC and Southern LNG shall develop procedures for off-site contractors' responsibilities, restrictions, and limitations and for supervision of these contractors by ELC and Southern LNG staff.
86. **Prior to commencement of service**, ELC and Southern LNG shall label piping with fluid service and direction of flow in the field in addition to the pipe-labeling requirements of NFPA 59A.

87. **Prior to commencement of service**, ELC and Southern LNG shall specify an alarm management program to ensure effectiveness of process alarms.
88. **Prior to commencement of service**, ELC and Southern LNG shall notify FERC staff of any proposed developments to the Facility Security Plan.
89. **Prior to commencement of service**, progress on the construction of the proposed systems shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, problems encountered, contractor nonconformance/deficiency logs, remedial actions taken, and current ELC and Southern LNG project schedule. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.

In addition, recommendations 90 through 92 shall apply throughout the life of the LNG facility:

90. 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, ELC and Southern LNG 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 P&IDs 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 semi-annual report, shall be submitted.
91. 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, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil-off/flash gas, etc.), plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/loading/shipping problems, potential hazardous conditions from 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, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, hazardous fluids releases, fires involving hazardous fluids and/or from other sources, negative pressure (vacuum) within a storage tank and higher than predicted boil-off rates. Adverse weather conditions and the effect on the facility also shall 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 be included in the

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

92. Significant non-scheduled events, including safety-related incidents (e.g., LNG, condensate, refrigerant, or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (e.g., 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 fluids for 5 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 LNG facility that contains, controls, or processes hazardous fluids;
 - h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes hazardous fluids 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 an LNG facility that contains or processes hazardous fluids 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 operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes hazardous fluids;
- l. safety-related incidents to hazardous materials transportation 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 will 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 investigation results and recommendations to minimize a reoccurrence of the incident.