

189 FERC ¶ 61,133  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Willie L. Phillips, Chairman;  
Mark C. Christie, David Rosner,  
Lindsay S. See and Judy W. Chang

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

Docket No. CP23-375-000

ORDER AMENDING AUTHORIZATION UNDER SECTION 3  
OF THE NATURAL GAS ACT

(Issued November 21, 2024)

1. On April 28, 2023, Elba Liquefaction Company, L.L.C. (ELC) and Southern LNG Company, L.L.C. (Southern LNG) filed an application seeking to amend their authorization under section 3 of the Natural Gas Act (NGA)<sup>1</sup> and part 153 of the Commission's regulations<sup>2</sup> to make modifications to existing liquefaction facilities and to install and operate a new condensate plant and liquid nitrogen vaporizers at their existing liquefied natural gas (LNG) terminal in Chatham County, Georgia (Elba Liquefaction Optimization Project or project). The proposed modifications would increase the LNG Terminal's production capacity from 2.5 million metric tons per annum (MTPA) to 2.9 MTPA. As discussed below, the Commission grants the applicants' proposal, subject to the conditions herein.

**I. Background and Proposal**

2. Southern LNG and ELC are limited liability companies organized under the laws of Delaware, with their principal offices located in Birmingham, Alabama.<sup>3</sup> Southern LNG is a wholly-owned subsidiary of Kinder Morgan Energy Partners, L.P., a Delaware limited partnership, and is indirectly controlled by Kinder Morgan, Inc., a Delaware corporation.<sup>4</sup> ELC is owned by Southern Liquefaction Company, LLC, CDI Tuscany

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<sup>1</sup> 15 U.S.C. § 717b(a).

<sup>2</sup> 18 C.F.R. pt. 153 (2024).

<sup>3</sup> Application at 5.

<sup>4</sup> *Id.* at Ex. B.

Intermediate Holdings, LLC, and BX ELC Holdings LLC, which are all Delaware limited liability companies.<sup>5</sup>

3. In 1972, Southern LNG received authorization to operate an LNG import terminal on Elba Island in Chatham County, Georgia, five miles downstream from the city of Savannah, Georgia, on the Savannah River,<sup>6</sup> and commenced operations at the Elba Island terminal in 1978. From 1982 to 2000, the terminal was taken out of service and maintained in standby mode. In a series of orders from 1999 to 2001, the Commission authorized the re-commissioning and expansion of the Elba Island terminal (Elba I).<sup>7</sup> In 2002 and 2003, the Commission authorized a further expansion of the Elba Island terminal (Elba II),<sup>8</sup> which was placed into service on February 1, 2006. In 2007, the Commission authorized additional facilities to expand the storage capacity of the terminal by 8.44 Bcf and the vaporization capacity by 900 million cubic feet per day (MMcf/day) in two phases, Phase A and Phase B<sup>9</sup> (Elba III Expansion).<sup>10</sup> Phase A included the modification of existing unloading docks, construction of a new storage tank with 4.22 Bcf of storage capacity, and installation of additional vaporization with a firm send-out capacity of 405 MMcf/day. On May 17, 2012, the Commission authorized Southern LNG to install and operate a new 2,500 horsepower electric-driven boil-off gas compressor unit at the terminal.<sup>11</sup>

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<sup>5</sup> See *id.*; ELC January 29, 2024 Data Request Response.

<sup>6</sup> *S. Energy Co.*, 47 FPC 1624 (1972).

<sup>7</sup> *S. LNG, Inc.*, 89 FERC ¶ 61,314 (1999), *reh'g denied*, 90 FERC ¶ 61,257 (2000); *S. LNG, Inc.*, 94 FERC ¶ 61,188 (2001); *S. LNG, Inc.*, 96 FERC ¶ 61,083 (2001).

<sup>8</sup> *S. LNG, Inc.*, 101 FERC ¶ 61,187 (2002), *order on reh'g*, 103 FERC ¶ 61,029 (2003).

<sup>9</sup> On August 2, 2011, after Phase A was placed into service, Southern LNG requested that the Commission vacate the authorization for Phase B. On October 11, 2011, the Commission granted Southern LNG's request. See *S. LNG Co., L.L.C.*, 137 FERC ¶ 61,034 (2011).

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

<sup>11</sup> *S. LNG Co., L.L.C.*, 139 FERC ¶ 61,120 (2012).

4. Finally, on June 1, 2016, the Commission authorized liquefaction and export facilities<sup>12</sup> at the terminal (Elba Liquefaction Project).<sup>13</sup> Specifically, the Elba Liquefaction Project included: (1) the installation of ten Movable Modular Liquefaction System (MMLS) units and ancillary facilities, with a total liquefaction capacity of approximately 2.5 MTPA; and (2) the modification of the terminal to allow Southern LNG to load LNG onto carriers berthed at an existing marine berth. As currently authorized, the Elba Island LNG Terminal is capable of bi-directional service with the ability to import and export LNG, and includes two LNG carrier berths, five LNG storage tanks, vaporization, send out facilities, ten MMLS units, and associated auxiliary facilities operated by Southern LNG.<sup>14</sup> The LNG Terminal's current storage capacity is 11.5 Bcf, with 1,775 MMcf/d of peak vaporization and send-out capacity.<sup>15</sup>

5. ELC and Southern LNG request to amend their section 3 authorization to improve the liquefaction process at the LNG Terminal by reducing the fouling rate<sup>16</sup> in the liquefaction units and the resultant flaring events associated with cold box deriming,<sup>17</sup> and building redundancy and reliability into the terminal and auxiliary facilities.<sup>18</sup> Specifically, the Elba Liquefaction Optimization Project consists of: (1) modifications at the ten MMLS units, which will include retrofitting the current dehydration systems with adsorbent media and upgrading bed regeneration equipment; (2) installation of a new condensate plant, to be co-located with the auxiliary facilities, which will separate the hydrocarbons from water in the effluent stream and stabilize the condensate to an

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<sup>12</sup> The liquefaction facilities were constructed and are owned by ELC and operated by Southern LNG. The export facilities are owned and operated by Southern LNG.

<sup>13</sup> *Elba Liquefaction Co., L.L.C.*, 155 FERC ¶ 61,219 (2016).

<sup>14</sup> Application at 7.

<sup>15</sup> *Id.*

<sup>16</sup> Fouling is the accumulation of unwanted material on solid surfaces. The applicants indicate that the fouling rate of the cold box has been higher than what was anticipated and that the cold box then has to be warmed up in order to clean out the frozen heavy hydrocarbons to reestablish normal operating pressures. *Id.* at 10-11.

<sup>17</sup> Cold box deriming refers to the process of warming up a piece of cryogenic equipment to defrost the frozen particles. *Id.* at 11.

<sup>18</sup> *See id.* at 11-13.

appropriate Reid vapor pressure;<sup>19</sup> and (3) installation of three new liquid nitrogen vaporizers and associated piping and valves. The applicants state that the modifications to the MMLS units and the installation of the condensate plant will reduce cold box fouling, which they argue will increase LNG production, whereas the vaporizers will build redundancy and reliability into the LNG Terminal.

6. As a result of the proposed modifications, ELC and Southern LNG request authorization to increase the LNG Terminal's liquefaction capacity from 2.5 MTPA to 2.9 MTPA.<sup>20</sup>

## **II. Notice, Interventions, and Protests**

7. Notice of the amendment application was published in the *Federal Register* on May 16, 2023,<sup>21</sup> establishing May 31, 2023, as the deadline for filing protests, motions to intervene, and comments. Public Citizen, National Gas Supply Association, and Center for LNG filed timely, unopposed motions to intervene.<sup>22</sup>

8. On December 27, 2023, Public Citizen filed a motion requesting that the Commission require the applicants to make all of the information in Exhibit B of their application, specifically regarding ownership of ELC, publicly available.<sup>23</sup> On January 29, 2024, in response to a Commission staff data request, the applicants publicly provided the requested information.<sup>24</sup> Therefore, Public Citizen's motion is dismissed as moot. Subsequently, on January 30, 2024, Public Citizen filed comments requesting that the Commission require ELC to identify the "upstream owners" of BX ELC

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<sup>19</sup> Reid vapor pressure (RVP) is a measure of the volatility of the condensate and is defined as the absolute vapor pressure measured at 100 degrees Fahrenheit. Appropriate RVPs (10 to 12 pounds per square inch) ensure that the light components of the condensate do not separate as a gas phase in the storage tanks or pipelines.

<sup>20</sup> *Id.* at 4. This is approximately equivalent to increasing production from 130 billion cubic feet per year (Bcf/y) of natural gas to 150 Bcf/y of natural gas, but the amount will vary based upon composition and density of the LNG product.

<sup>21</sup> 88 Fed. Reg. 31252.

<sup>22</sup> All 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) (2024).

<sup>23</sup> In their application, the applicants redacted the name of one of ELC's owners.

<sup>24</sup> *See supra* P 2.

Holdings LLC and CDI Intermediate Holdings LLC. Under the Commission’s regulations, applicants are required to provide “a detailed statement of the financial and corporate relationship existing between [the] applicant and any person or corporation”.<sup>25</sup> ELC has identified its owners and thus has provided the information required by the Commission’s regulations. Public Citizen does not state how identification of “upstream owners” bear on the applicants’ request to amend their section 3 authorization. We find that ELC’s Exhibit B is sufficiently detailed to allow us to determine that the proposed amendment is not inconsistent with the public interest.<sup>26</sup>

### III. Discussion

#### A. Public Interest Standard

9. The applicants’ proposal to modify facilities at the Elba Island LNG Terminal and increase the terminal’s liquefaction capacity to levels above those previously authorized requires Commission approval under section 3(a) of the NGA.<sup>27</sup> Section 3 provides that an application shall be approved unless the Commission finds that the proposal “will not be consistent with the public interest,” subject to “such terms and conditions as the Commission may find necessary or appropriate.”<sup>28</sup> When the Commission previously

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<sup>25</sup> 18 C.F.R. § 153.8(a)(2) (2024). *See also Rio Grande LNG, LLC*, 187 FERC ¶ 61,097, at P 13 (2024).

<sup>26</sup> *See e.g., Golden Pass LNG Terminal LLC*, 165 FERC ¶ 61,261 (2018) (authorizing transfer of NGA section 3 authorization with similar level of disclosure of corporate relationships).

<sup>27</sup> 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.* 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 U.S. Department of Energy (DOE) Delegation Order No, S1-DEL-FERC-2006, effective May 16, 2006. The Commission does not authorize importation or exportation of the commodity itself. Rather, application for authorization to import or export natural gas must be submitted to the DOE. *See EarthReports, Inc. v. FERC*, 828 F.3d 949, 952-53 (D.C. Cir. 2016) (detailing how regulatory oversight for the export of LNG and supporting facilities is divided between the Commission and DOE).

<sup>28</sup> 15 U.S.C. § 717b(a). For a discussion of the Commission’s authority to condition its approvals of LNG facilities under section 3 of the NGA, *see, e.g., Distrigas Corp. v. FPC*, 495 F.2d 1057, 1063-64 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974); *Dynegy LNG Prod. Terminal, L.P.*, 97 FERC ¶ 61,231 (2001).

evaluated and authorized the Elba Liquefaction Project, which enabled the liquefaction and exportation of LNG from the LNG Terminal, it determined that the proposal was not inconsistent with the public interest.<sup>29</sup>

10. The Commission finds that the amendment application and related filings contain adequate support to justify the proposed 0.4 MTPA increase of authorized liquefaction capacity at the project. The requested amendment will not alter the project's authorized level of storage capacity; rather, it will increase the authorized export capacity at the LNG terminal from 2.5 MTPA to 2.9 MTPA. ELC and Southern LNG estimate that the additional liquefaction volume will result in up to approximately four additional LNG vessels and up to 52 LNG barges per year visiting the terminal, which would not exceed the current number of ships contemplated by the United States Coast Guard (Coast Guard) in its prior Letter of Recommendation and Waterway Suitability Assessment.<sup>30</sup>

11. Southern LNG holds long-term LNG export authorizations from the U.S. Department of Energy, Office of Fossil Energy and Carbon Management (DOE/FE) for domestically produced LNG by vessel to Free Trade Agreement (FTA)<sup>31</sup> countries and non-FTA<sup>32</sup> countries.<sup>33</sup> On September 25, 2023, Southern LNG filed a separate

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<sup>29</sup> See *Elba Liquefaction Co., L.L.C.*, 155 FERC ¶ 61,219 at P 30.

<sup>30</sup> See Application, Resource Report 13 at 13-7, 13-9. The applicants also provided confirmation from the Coast Guard that the previously issued Letter of Recommendation and Waterway Suitability Assessment is adequate for the proposed project and increase of three to four ships a year. See ELC October 2, 2023 Data Request Response at 4 and attach. 2.

<sup>31</sup> *S. LNG Co., L.L.C.*, DOE/FE, Order No. 3106, Docket No. 12-54-LNG (June 15, 2012) (authorizing exports by vessel to any country with which the United States currently has, or in the future will have, an FTA requiring national treatment for trade in natural gas for a twenty five-year term).

<sup>32</sup> *S. LNG Co., L.L.C.*, DOE/FE Order No. 3956, Docket No. 12-100-LNG (Dec. 16, 2016) (authorizing exports to any non-FTA nations).

<sup>33</sup> See *S. LNG Co., L.L.C.*, DOE/FE, Order Nos. 3106-A & 3956-A, Docket Nos. 12-54-LNG & 12-100-LNG (Dec. 30, 2020) (extending the export term for domestically produced LNG through December 31, 2050). Additionally, on March 30, 2021, DOE/FE authorized Southern LNG to export previously imported LNG to FTA and non-FTA countries over a two-year term. See *S. LNG Co., L.L.C.*, DOE/FE Order No. 4687, Docket No. 20-99-LNG (Mar. 30, 2021). On March 15, 2023, DOE/FE extended the export term for previously imported LNG for a two-year period. See *S. LNG Co., L.L.C.*, DOE/FE Order No. 4982, Docket No. 22-166-LNG (Mar. 15, 2023).

application with the DOE/FE (Docket No. 23-109-LNG), seeking an increase of its total authorized export volume to 158.25 Bcf/y of natural gas to non-FTA countries, to align the DOE/FE authorization with the liquefaction capacity requested in this proceeding. The DOE/FE is currently evaluating Southern LNG's application.

12. In accordance with the Memorandum of Understanding signed on August 31, 2018, by the Commission and the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the U.S. Department of Transportation,<sup>34</sup> PHMSA undertook a review of the facility's ability, at the revised export capacity, to comply with the federal safety standards contained in Part 193, Subpart B - Siting, of Title 49 of the Code of Federal Regulations.<sup>35</sup> On February 7, 2024, PHMSA provided a Letter of Determination to the Commission, concluding that, based on its review, the project would comply with the siting requirements in Part 193, Subpart B.<sup>36</sup> If the project is subsequently modified so that it differs from the details provided in the documentation submitted to PHMSA, further review would be conducted by PHMSA.

13. For the reasons stated above, we find that the applicants' proposal is not inconsistent with the public interest. Therefore, the Commission will grant the applicants' request, subject to the conditions herein, and authorize the proposed modifications and increase in liquefaction capacity at the Elba Island LNG Terminal to 2.9 MTPA.

## **B. Environmental Impacts**

14. On June 9, 2023, the Commission issued a *Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Elba Liquefaction Optimization Project*. The notice was published in the *Federal Register*<sup>37</sup> and mailed to interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American Tribes; local libraries and newspapers; and affected property owners. We received two comments in response to the notice. The National Park Service (NPS) stated concerns regarding potential visual and noise impacts to the Fort Pulaski National Monument, the Gullah Geechee Heritage Corridor

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<sup>34</sup> *Memorandum of Understanding Between the Department of Transportation and the Federal Energy Regulatory Commission Regarding Liquefied Natural Gas Transportation Facilities* (Aug. 31, 2018), <https://www.ferc.gov/legal/mou/2018/FERC-PHMSA-MOU.pdf>.

<sup>35</sup> 49 C.F.R. pt. 193, subpt. B (2024).

<sup>36</sup> See Commission staff's February 8, 2024 Memo.

<sup>37</sup> 88 Fed. Reg. 39250 (June 15, 2023).

National Heritage Area, and the Fort James Jackson National Historic Landmark. Additionally, the U.S. Fish and Wildlife Service (FWS) noted concerns regarding light from the terminal creating or contributing to sky glow, which could impact nesting and hatchling sea turtles, as well as migratory birds.

15. To satisfy the requirements of the National Environmental Policy Act (NEPA) of 1969,<sup>38</sup> Commission staff prepared an Environmental Assessment (EA) for the proposal. The EA was prepared with the cooperation of DOE, the Coast Guard, and the U.S. Department of Transportation. The analysis in the EA addressed geology, soils, water resources, vegetation, wildlife, threatened and endangered species, land use, visual resources, cultural resources, air quality and greenhouse gas emissions, noise, safety, environmental justice,<sup>39</sup> cumulative impacts, and alternatives. The analysis in the EA addressed all substantive environmental comments and concluded that the project would not constitute a major federal action significantly affecting the quality of the human environment.<sup>40</sup>

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<sup>38</sup> 42 U.S.C. §§ 4321 *et seq.* See also 18 C.F.R. pt. 380 (2024) (Commission's regulations implementing NEPA) and 40 C.F.R. pts 1500-1508 (CEQ regulations). See 18 C.F.R. § 380.1 (stating that the Commission will comply with CEQ regulations); *but see Marin Audubon Society v. FAA*, No. 23-1067, 2024 WL 4745044, Slip op. at 20 (D.C. Cir. Nov. 12, 2024) (holding that CEQ had no lawful authority to promulgate binding regulations and questioning but not deciding whether another agency could permissibly adopt CEQ's regulations or incorporate them by reference).

<sup>39</sup> Under NEPA, the Commission considers impacts to all potentially affected communities. Consistent with Executive Orders 12,898, 14,008, and 14,096 the Commission separately identifies and addresses disproportionate and adverse human health or environmental effects on environmental justice communities. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994); Exec. Order No. 14,008, 86 Fed. Reg. 7619 (Jan. 27, 2021); Exec. Order No. 14,096, 88 Fed. Reg. 25251 (Apr. 21, 2023). See *infra* PP 25-40.

<sup>40</sup> EA at 52-54, 56. Commission staff could not determine whether the impacts from greenhouse gas emissions attributable to the project would be significant or insignificant. *Id.* at 56-58; see 42 U.S.C. § 4336(b)(2) ("An agency shall prepare an environmental assessment with respect to a proposed agency action that does not have a reasonably foreseeable significant effect on the quality of the human environment, or if the significance of such effect is unknown...."). We note that NEPA does not require the Commission to classify every environmental impact as significant or insignificant. See *Food & Water Watch v. FERC*, 104 F.4th 336, 346 (D.C. Cir. 2024); see also *Transcon*.

16. The EA was issued for a 30-day comment period and placed into the public record on March 8, 2024. A Notice of Availability of the EA was published in the *Federal Register*<sup>41</sup> and mailed to interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American Tribes; local libraries and newspapers; and affected property owners. The Commission received comments on the EA from NPS regarding the effects of lighting and noise pollution from the project at the McQueen's Island Trail within the Fort Pulaski National Monument. These comments are addressed below.

17. The Commission also received comments from FWS regarding Endangered Species Act consultation. The EA concluded that the project may affect but is not likely to adversely affect the federally listed loggerhead sea turtle, leatherback sea turtle, green sea turtle, and Kemp's Ridley sea turtle, and Commission staff requested concurrence from FWS with those determinations.<sup>42</sup> On March 11, 2024, FWS provided concurrence with Commission staff's determinations and noted that no further action is required under the Endangered Species Act.<sup>43</sup> Accordingly, recommended environmental condition 13 from the EA, which required completing consultation with FWS regarding the proposed action, has been satisfied and is not included in the appendix to this order.

### 1. Air Quality

18. On March 6, 2024, the U.S. Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter less than 2.5 micrometers (PM<sub>2.5</sub>), lowering the primary annual standard from 12.0 micrograms per cubic meter (µg/m<sup>3</sup>) to 9.0 µg/m<sup>3</sup>.<sup>44</sup> The revised NAAQS became effective on May 6, 2024. To confirm that the project would not result in PM<sub>2.5</sub> air quality impacts greater than the revised annual PM<sub>2.5</sub> NAAQS in the surrounding communities, on May 21, 2024, Commission staff issued an Environmental Information Request to the applicants, requesting a revised air quality analysis. On May 29, 2024, the applicants updated their air dispersion modeling, which demonstrated that the background concentration of annual PM<sub>2.5</sub> for the project area is 7.9 µg/m<sup>3</sup> and

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*Gas Pipe Line Co.*, 187 FERC ¶ 61,200, at P 33 (2024) (applying *Food & Water Watch* in the context of an environmental assessment).

<sup>41</sup> 88 Fed. Reg. 18633 (Mar. 14, 2024).

<sup>42</sup> See EA at 19.

<sup>43</sup> FWS March 13, 2024 Comments.

<sup>44</sup> 89 Fed. Reg. 16202 (Mar. 6, 2024).

the maximum modeled annual PM<sub>2.5</sub> concentrations is 8.19 µg/m<sup>3</sup>.<sup>45</sup> Commission staff reviewed the modeling and determined that the estimated project annual PM<sub>2.5</sub> air quality impacts would not exceed the EPA's revised annual PM<sub>2.5</sub> standard.

## 2. Visual Impacts

19. At its closest point, the project will be located 0.3 miles from the boundary of the Fort Pulaski National Monument. In its comments, NPS contends that the EA dismissed potential visual impacts at the monument because the portion of the monument closest to the project site is not easily accessible to the public.<sup>46</sup> NPS encourages the Commission to require an outdoor lighting plan for the project, including specific lighting recommendations, to help mitigate outdoor lighting impacts and impacts on the quality of the night sky.<sup>47</sup>

20. The EA concludes that construction would not result in significant or adverse visual impacts because the new facilities would be obscured by existing tanks and buildings at the LNG Terminal, the new facilities would be consistent with the industrial nature of the existing facilities, and the portion of the monument closest to the project consists almost entirely of wetlands and marshes and is not easily accessible.<sup>48</sup> Regarding lighting impacts, the EA states that the applicants propose to install approximately 15 new lights and that the lighting will be directly visible from the terminal and may be visible from indirect illumination or skyglow.<sup>49</sup> As detailed in the EA, to mitigate light impacts, the additional lights for the project would comply with the Florida Fish and Wildlife Conservation Commission's established guidelines,<sup>50</sup> and would be angled down, mounted as low as possible, and shielded to reduce unnecessary illumination and skyglow to the extent practicable.<sup>51</sup> ELC and Southern LNG propose

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<sup>45</sup> ELC and Southern LNG's May 29, 2024 Environmental Information Request Response.

<sup>46</sup> NPS April 3, 2024 Comments.

<sup>47</sup> *Id.* at 2.

<sup>48</sup> EA at 22.

<sup>49</sup> *Id.* at 17-18.

<sup>50</sup> FWS recommended that the project comply with the Florida Fish and Wildlife Conservation Commission's guidelines, and the applicants confirmed that the new lights will comply with the guidelines. *Id.* at 18-19.

<sup>51</sup> *Id.* at 19.

to use new lights of a full cutoff LED type, with low wattage, and short mounting height, and state that the light would not be emitted at or above 90° horizontal. Although light could potentially be observable beyond the facility, the EA concludes that the new lighting would be a small, incremental addition to the light associated with the existing facility and is necessary for safety purposes.<sup>52</sup> We agree.

21. The EA further states that any light management plan would have to comply with Coast Guard, PHMSA, and U.S. Federal Aviation Administration safety regulations, and indicates that the type of plan recommended by NPS would not comply with those regulations.<sup>53</sup> The EA later discusses lighting for safety purposes in Appendix B, which also recommends lighting meet certain lighting recommended practices by American Petroleum Institute for safety purposes, adopted herein under Environmental Condition 26.<sup>54</sup> Nonetheless, the EA concludes that lighting for the project may affect, but is not likely to adversely affect endangered species and would not result in adverse visual impacts.<sup>55</sup> We agree and find that no additional outdoor lighting mitigation is necessary.

### **3. Noise Impacts**

22. In its comments, NPS notes that the EA did not quantify the project's actual impact on the local acoustic environment, in particular the natural and cultural soundscape of the Fort Pulaski National Monument, and did not take NPS's metric recommendations into account.<sup>56</sup> It states that sound levels range from 35 to 38 A-weighted decibels (dBA) across the Fort Pulaski National Monument and suggests

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<sup>52</sup> *Id.*

<sup>53</sup> See EA at 19. See also ELC and Southern LNG's August 14, 2023 Environmental Data Request Response.

<sup>54</sup> EA at app. B, B-11

<sup>55</sup> *Id.* at 19, 22. In support of the conclusion that there are no adverse visual impacts associated with the project, the EA explains that the project is within the developed limits of the LNG Terminal, does not implicate any new land use or aesthetic issues, is not located in the vicinity of residential land, and would be primarily visible to recreational users of the Fort Pulaski National Monument in a location that consists almost entirely of wetland and marshes that are not easily accessible by the public except by boat. *Id.* at 22.

<sup>56</sup> NPS April 3, 2024 Comments at 2.

that the Commission consider a lower noise threshold than the standard EPA criteria.<sup>57</sup> NPS asserts that the EA did not include any measurements or predicted noise levels<sup>58</sup> and maintains that the EA failed to account for the Noise Sensitive Area (NSA) at the terminus of the McQueen's Island Trail, as required under Environmental Condition 28 in the Commission's 2016 order authorizing the Elba Liquefaction Project.<sup>59</sup>

23. As stated in the EA, project facilities would be installed within the existing LNG Terminal. The Fort Pulaski National Monument is approximately 7.45 miles from the project site, and thus noise from the project would have little to no impact on the monument as noise naturally attenuates with distance. The EA found that project construction would have minor, short-term impacts, which would be attenuated by the operational noise and existing structures of the facility. There would be no additional operational noise associated with the project.<sup>60</sup> Existing operational noise emanating from the facility is mitigated through a variety of noise control measures, including building insulation, use of silencers, location of piping, fans, and venting, as well as the design of the buildings.

24. Environmental Condition 28 of the Commission's 2016 order required ELC and Southern LNG to file a full-load noise survey with the Secretary to include the terminus of McQueen's Island Trail.<sup>61</sup> A post-construction noise survey for the Elba Liquefaction Project (Docket No. CP14-103) was conducted on October 19, 2020, to quantify the noise level at nearby NSAs during normal full load operation.<sup>62</sup> The results of the sound survey indicated that the sound level attributable to the LNG Terminal at the nearby NSAs, which included the McQueen's Island Trail, were lower than the day-night noise level requirement of 55 dBA.<sup>63</sup> Regarding NPS's suggestion that the Commission consider a lower noise threshold than the standard EPA criteria, we note that this same recommendation was evaluated in the referenced 2016 order and the Commission

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<sup>57</sup> *Id.* at 2-3.

<sup>58</sup> *Id.* at 3.

<sup>59</sup> *Id.*

<sup>60</sup> EA at 41-42.

<sup>61</sup> *Elba Liquefaction Co.*, 155 FERC ¶ 61,219 at app. B, Env't. Condition 28.

<sup>62</sup> See ELC and Southern LNG's December 3, 2020 Full Load Sound Survey, Accession No. 20201203-5191.

<sup>63</sup> Application, Resource Report 9, at 9-11.

concluded that the modification to its noise criteria was not justified.<sup>64</sup> We continue to agree with that conclusion. The EA concludes that, based on the short duration and intermittent nature of construction activities, distance to NSAs, and lack of operational noise increases, the project will not have significant noise impacts.<sup>65</sup> We agree.

#### 4. Environmental Justice

25. In conducting NEPA reviews of proposed natural gas projects, the Commission follows Executive Orders 12898 and 14096, which direct federal agencies to identify and address disproportionate and adverse human health or environmental effects of their actions on minority and low-income populations (i.e., environmental justice communities).<sup>66</sup> Executive Order 14008 also directs agencies to develop programs, policies, and activities to address the disproportionate and adverse “human health, environmental, climate-related, and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”<sup>67</sup> Environmental justice is “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”<sup>68</sup>

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<sup>64</sup> See *Elba Liquefaction Co.*, 155 FERC ¶ 61,219 at P 104 (“[M]odification 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.”).

<sup>65</sup> EA at 42.

<sup>66</sup> Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994); Exec. Order No. 14,096, 88, Fed. Reg. 25251 (Apr. 21, 2023).

<sup>67</sup> Exec. Order No. 14,008, 86 Fed. Reg. 7619, at 7629 (Jan. 27, 2021). The term “environmental justice community” includes communities that have been historically marginalized and overburdened by pollution. *Id.* The term also includes, but may not be limited to minority populations, low-income populations, or indigenous peoples. See EPA, EJ 2020 Glossary (Feb. 2024), <https://www.epa.gov/system/files/documents/2024-02/ej-2020-glossary.pdf>.

<sup>68</sup> See EPA, EJ 2020 Glossary (Feb. 2024), <https://www.epa.gov/system/files/documents/2024-02/ej-2020-glossary.pdf>. Fair

26. Consistent with Council on Environmental Quality (CEQ)<sup>69</sup> and EPA<sup>70</sup> guidance and recommendations, the Commission's methodology for assessing environmental justice impacts considers: (1) whether environmental justice communities (e.g., minority or low-income populations)<sup>71</sup> exist in the project area; (2) whether impacts on environmental justice communities are disproportionate and adverse; and (3) possible mitigation measures. As recommended in *Promising Practices*, the Commission uses the 50% and the meaningfully greater analysis methods to identify minority populations.<sup>72</sup> Specifically, a minority population is present where either: (1) the aggregate minority population of the block groups in the affected area exceeds 50%; or

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treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. *Id.* Meaningful involvement of potentially affected environmental justice community residents means: (1) people have an appropriate opportunity to participate in decisions about a proposed activity that may affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) community concerns will be considered in the decision-making process; and (4) decision makers will seek out and facilitate the involvement of those potentially affected. *Id.*

<sup>69</sup> CEQ, *Environmental Justice: Guidance Under the National Environmental Policy Act* (Dec. 1997) (CEQ's *Environmental Justice Guidance*), <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>. CEQ offers recommendations on how federal agencies can provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. There were opportunities for public involvement during the Commission's environmental review processes. *See supra* PP 14-17.

<sup>70</sup> *See generally* EPA, *Promising Practices for EJ Methodologies in NEPA Reviews* (Mar. 2016) (*Promising Practices*), [https://www.epa.gov/sites/default/files/2016-08/documents/nepa\\_promising\\_practices\\_document\\_2016.pdf](https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf).

<sup>71</sup> *See generally*, Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994). Minority populations are those groups that include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

<sup>72</sup> *See Promising Practices* at 21-25.

(2) the aggregate minority population in the block group affected is 10% higher than the aggregate minority population percentage in the county.<sup>73</sup>

27. CEQ's *Environmental Justice Guidance* also directs low-income populations to be identified based on the annual statistical poverty thresholds from the U.S. Census Bureau. Using *Promising Practices*' low-income threshold criteria method, low-income populations are identified as block groups where the percent of a low-income population in the identified block group is equal to or greater than that of the county.

28. To identify potential environmental justice communities during preparation of the EA, Commission staff used 2021 U.S. Census American Community Survey data<sup>74</sup> for the race, ethnicity, and poverty data at the state, county, and block group level.<sup>75</sup> Additionally, in accordance with *Promising Practices*, staff used EJScreen, EPA's environmental justice mapping and screening tool, as an initial step to gather information regarding minority and low-income populations; potential environmental quality issues; environmental and demographic indicators; and other important factors.<sup>76</sup>

29. Once staff collected the block group level data, as discussed in further detail below, staff conducted an impacts analysis for the identified environmental justice communities and evaluated health or environmental hazards, the natural physical environment, and associated social, economic, and cultural factors to determine whether impacts were disproportionate and adverse on environmental justice communities and

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<sup>73</sup> Here, Commission staff selected Chatham County, Georgia and Jasper County, South Carolina as the reference communities to ensure that affected environmental justice communities are properly identified. See EA at 27.

<sup>74</sup> U.S. Census Bureau, American Community Survey 2021 ACS 5-Year Estimates Detailed Tables, File# B17017, Poverty Status in the Past 12 Months by Household Type by Age of Householder, <https://data.census.gov/cedsci/table?q=B17017>; File #B03002 Hispanic or Latino Origin By Race, <https://data.census.gov/cedsci/table?q=b03002>.

<sup>75</sup> For this project, Commission staff determined that a two-mile radius around the proposed aboveground facilities was the appropriate unit of geographical analysis for assessing project impacts on the environmental justice communities. A two-mile radius for the LNG Terminal is sufficiently broad considering the likely concentration of construction-period air and noise emissions, visual impacts, and traffic impacts proximal to the terminal construction site. See EA at 27.

<sup>76</sup> EPA, *Purposes and Uses of EJScreen* (Jan. 9, 2024) <https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen> ("Screening tools should be used for a 'screening-level' look. Screening is a useful first step in understanding or highlighting locations that may be candidates for further review.").

also whether those impacts were significant.<sup>77</sup> Commission staff assessed whether impacts to an environmental justice community were disproportionate and adverse based on whether those impacts were predominately borne by that community, consistent with EPA's recommendations in *Promising Practices*.<sup>78</sup>

30. The Commission's environmental staff identified three block groups within the geographic scope of analysis, of which one block group (Block Group 4) exceeded the defined threshold for a low-income community and is therefore an environmental justice community.<sup>79</sup> The environmental justice community is located within two miles of the LNG Terminal, on the northern side of the Savannah River, in Jasper County, South Carolina.

31. The EA's discussion of impacts on the identified environmental justice community focuses on visual impacts, socioeconomics, traffic, and air and noise impacts from construction and operation.<sup>80</sup> The EA does not focus on environmental justice concerns for other resource areas due to the minimal overall impact the project would have on those resource areas. We concur with this determination.

**a. Visual Resources**

32. With respect to visual impacts on environmental justice populations, as described in the EA,<sup>81</sup> the project area is wholly within the developed limits of the LNG Terminal and the surrounding area is predominately characterized as rural tidal marshlands.<sup>82</sup>

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<sup>77</sup> An agency may determine that impacts are disproportionate and adverse, but not significant within the meaning of NEPA and in other circumstances an agency may determine that an impact is *both* disproportionate and adverse and significant within the meaning of NEPA. See *Promising Practices* at 33.

<sup>78</sup> There are various approaches to determining whether an action will cause a disproportionate and adverse impact, and one recommended approach is to consider whether an impact would be "predominantly borne by minority populations or low-income populations." See *id.* at 44-46.

<sup>79</sup> See EA at tbl. 4.9-1.

<sup>80</sup> *Id.* at 30-35.

<sup>81</sup> *Id.* at 22.

<sup>82</sup> *Id.* at 30.

33. The closest residences in the adjacent environmental justice community are located 3.5 miles north of the facility. The modifications associated with the project would be shielded by the existing LNG Terminal tanks and some of the upper portions of the trains. Thus, the modifications would not be visible at the residences.<sup>83</sup> Potential visual impacts would be largely imperceptible. Marine woody vegetation obstructs views of the project site from within the environmental justice community and the modifications would not be visible to recreational users of nearby waterbodies.<sup>84</sup> The increase in shipping traffic would not be readily perceptible by residences along the waterway due to the distance to the shipping channel, existing vegetation, and normal shipping corridor use.<sup>85</sup> Additionally, the applicants propose to reduce illumination and nighttime sky glow by mounting 15 new lighting structures as low as possible, angling them downward, and using light shielding.<sup>86</sup> Given the distance to the closest residences within the environmental justice community and the masking of facility upgrades by the existing tall structures of the LNG Terminal, the EA concludes that visual impacts on environmental justice communities from the project would not be significant.<sup>87</sup> The EA finds that no cumulative visual impacts could occur from the project given that the project's modifications would not be visible to residences within the adjacent environmental justice community.<sup>88</sup> We agree.

**b. Socioeconomics**

34. The applicants anticipate that they would need approximately 50 workers, some of which would be locally hired from the Chatham County area, for project construction,<sup>89</sup> and no new workers to operate the facilities.<sup>90</sup> Thus, we agree with the EA's conclusion that impacts on socioeconomic resources within the adjacent environmental justice community (e.g., population, housing demand, and the provision of community services such as police, fire, and schools) would be less than significant,

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<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.* at 17-18.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.* at 48.

<sup>89</sup> *Id.* at 30-31

<sup>90</sup> *Id.*

as there would be a negligible change from current conditions.<sup>91</sup> The EA also concludes that cumulative impacts on socioeconomic resources within the environmental justice community would be minor and limited to periods of concurrent construction.<sup>92</sup> We agree.

35. Additionally, during project construction, traffic impacts would be concentrated on access roads south of the LNG Terminal and would result in a maximum of 20 vehicle passages per day.<sup>93</sup> While the access roads would not be located within the adjacent environmental justice community, the applicants propose to minimize construction traffic impacts on area roadways and residents by working with the construction contractor, the City of Savannah, local law enforcement, and other regulatory agencies to manage traffic in areas of active construction.<sup>94</sup> Given the minimal increase in temporary traffic, we agree with the EA's conclusion that traffic impacts on the environmental justice community would be less than significant.<sup>95</sup> The EA also finds that, given the temporary duration of construction activities, overall cumulative impacts on traffic within the environmental justice community would be less than significant.<sup>96</sup> We agree.

**c. Air Quality**

36. The applicants' proposed construction activities would result in short-term emissions from the use of construction equipment and vehicles, as well as fugitive dust associated with disturbances of surfaces inside the LNG Terminal.<sup>97</sup> Given that the closest residential or non-residential receptor is at least 3.5 miles from the LNG Terminal, the EA concludes that the adjacent environmental justice community would not experience construction air impacts.<sup>98</sup> Recreational users within the environmental justice community, the closest of which are located more than 1 mile from the project,

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<sup>91</sup> *Id.*

<sup>92</sup> *Id.* at 48.

<sup>93</sup> *Id.* at 31.

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at 48.

<sup>97</sup> *Id.* at 31.

<sup>98</sup> *Id.*

may experience temporary construction-related air impacts. The applicants would limit fugitive dust emissions by spraying water to dampen the surfaces of dry work areas and/or by the application of calcium chloride or other dust suppressants as needed.<sup>99</sup> Given the proposed mitigation measures, the EA determines that construction emissions would not result in a significant impact on air quality in the environmental justice community.<sup>100</sup> We agree.

37. Regarding operational air emissions, the reduced flaring activities would decrease some emissions, however the increased LNG production would result in an increase in actual emissions. The increase in emissions would not exceed the applicants' current Prevention of Significant Deterioration Clean Air Act permit allowances for emissions of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM).<sup>101</sup> In addition, the predicted modeled concentrations, when added to the representative ambient background concentration and compared to the NAAQS, demonstrate compliance with their respective standards.<sup>102</sup> Overall, the EA concludes that construction and operational emissions from the project would not have significant adverse air quality impacts on the environmental justice community in the project area.<sup>103</sup> We agree. Furthermore, given that the closest residence or non-residential community center (e.g., school, church, or library) within the environmental justice community is at least 3.5 miles from the LNG Terminal, the EA concludes that the environmental justice community would not experience construction air impacts<sup>104</sup> and that cumulative air quality impacts to the environmental justice community from the combination of the project and six nearby planned projects would not occur.<sup>105</sup> We agree.

**d. Noise Impacts**

38. Based on the distance to noise-sensitive receptors within the adjacent environmental justice community and the temporary nature of the applicants' proposed

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<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at 32.

<sup>102</sup> *Id.* at 39.

<sup>103</sup> *Id.* at 32.

<sup>104</sup> *Id.* at 31.

<sup>105</sup> *Id.* at 48-49.

construction activities, the EA finds that the project would not result in significant construction noise impacts on local residents within the environmental justice community and that there would be no additional operational noise associated with the project.<sup>106</sup> We agree. Additionally, given that the nearest residential or non-residential receptor is located 3.5 miles from the LNG Terminal, the EA concludes that the environmental justice community would not experience cumulative noise impacts from the project.<sup>107</sup> We agree.

**e. Environmental Justice Conclusion**

39. As described in the EA, the project would have impacts on the environment and on individuals living in the vicinity of the project facilities, including the adjacent environmental justice community.<sup>108</sup> One block group out of the three block groups within the geographic scope of the project is considered an environmental justice community.<sup>109</sup>

40. Impacts associated with the project on the environmental justice community would not be disproportionate and adverse as they would not be predominantly borne by the environmental justice community.<sup>110</sup> Project construction impacts on the environmental justice community associated with visual resources, socioeconomics, air quality, and noise would be less than significant.<sup>111</sup> In addition, there would be no permanent noise or air quality impacts on the environmental justice community associated with operation of the project's facilities.<sup>112</sup>

**5. Environmental Impacts Conclusion**

41. We have reviewed the information and analysis contained in the EA, as well as the other information in the record, regarding potential environmental effects of the project. We accept the environmental recommendations in the EA, as modified above,

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<sup>106</sup> *Id.*

<sup>107</sup> *Id.* at 48.

<sup>108</sup> *Id.* at 33.

<sup>109</sup> *Id.* at tbl. 4.9-1.

<sup>110</sup> *Id.* at 33.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

and are including them as conditions in an appendix to this order. Based on the analysis in the EA, as supplemented or clarified herein,<sup>113</sup> we conclude that if constructed and operated in accordance with ELC and Southern LNG's application and supplements, including any commitments made therein, and in compliance with the environmental conditions in the appendix to this order, our approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.<sup>114</sup>

#### IV. Conclusion

42. For the reasons stated above, we find that the Elba Liquefaction Optimization Project is not inconsistent with the public interest. Therefore, we will grant the applicants' request and authorize the proposed modifications and increase in liquefaction capacity at the Elba Island LNG Terminal to 2.9 MTPA.

43. Compliance with the environmental conditions appended to our orders is integral to ensuring that the environmental impacts of approved projects are consistent with those anticipated by our environmental analyses. Thus, Commission staff carefully reviews all information submitted. Only when satisfied that the applicant has complied with all applicable conditions will a notice to proceed with the activity to which the conditions are relevant be issued. We also note that the Commission has the authority to take whatever steps are necessary to ensure the protection of environmental resources during the ongoing construction and operation of the project, including authority to impose any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the order, as well as the avoidance or mitigation of unforeseen adverse environmental impacts resulting from construction and operation.

44. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this authorization. The

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<sup>113</sup> Although the analysis in the EA provides substantial evidence for our conclusions in this order, it is the order itself that serves as our record of decision. The order supersedes any inconsistent discussion, analysis, or finding in the EA.

<sup>114</sup> We are unable to characterize whether the impacts from greenhouse gas emissions attributable to the project would be significant or insignificant as there currently are no accepted tools or methods to do so. EA at 52-54; *see also supra* note 40; Fiscal Responsibility Act of 2023, Pub. L. No. 118-5, 137 Stat. 10 (2023) (amending NEPA to provide that preparation of an EA is acceptable when the proposed action "does not have a reasonably foreseeable significant effect on the quality of the human environment, or if the significance of such effect is unknown.") (codified at 42 U.S.C. § 4336(b)(2)).

Commission encourages cooperation between holders of NGA authorizations 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.<sup>115</sup>

45. The Commission on its own motion received and made part of the record in this proceeding all evidence, including the application 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 and operate the Elba Liquefaction Optimization Project, as described and conditioned herein, and as more fully described in the application and supplements.

(B) In all other respects, the authorization granted in the order authorizing the liquefaction and export facilities at the Elba Island LNG Terminal in CP14-103-000 shall remain in full force and effect.

(C) The authorization issued in Ordering Paragraph (A) is conditioned on ELC and Southern LNG's compliance with the environmental conditions in the Appendix to this order.

(D) Public Citizen's January 29, 2024, motion is dismissed as moot.

(E) ELC and Southern LNG shall construct and make available for service the proposed project within five years from the date of this order.

(F) ELC and Southern LNG shall notify the Commission's environmental staff by telephone and/or e-mail of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies the companies.

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<sup>115</sup> See 15 U.S.C. § 717r(d) (clarifying that a state or federal agency's failure to act on a permit is considered to be inconsistent with Federal law); *see also Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) (asserting that state regulation that interferes with FERC's regulatory authority over the transportation of natural gas is preempted); and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013) (noting that state and 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).

ELC and Southern LNG shall file written confirmation of such notification with the secretary of the Commission within 24 hours.

By the Commission.

( S E A L )

Debbie-Anne A. Reese,  
Secretary.

## Appendix

### **Environmental Conditions**

As recommended in the Environmental Assessment (EA), this authorization includes the following conditions:

1. Elba Liquefaction Company, LLC (ELC) and Southern LNG Company, LLC (SLNG) 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. ELC and SLNG 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), or the Director's designee, **before using that modification.**
2. The Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of life, health, property, and the environment during construction and operation of the Project. This authority shall allow:
  - a. the modification of conditions of the Order;
  - b. stop-work authority and authority to cease operation; and
  - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from Project construction and operation.
3. **Prior to any construction,** ELC and SLNG shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EIs), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets and diagrams. **As soon as they are available, and before the start of construction**, ELC and SLNG shall file with the Secretary any revised detailed survey alignment maps/sheets 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 alignment maps/sheets.
5. ELC and SLNG shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would 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 would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP, or the Director's designee, **before construction in or near that area**.

This requirement does not apply to extra workspace allowed by the Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
  - b. implementation of endangered, threatened, or special concern species mitigation measures;
  - c. recommendations by state regulatory authorities; and
  - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the authorization and before construction begins**, ELC and SLNG shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP, or the Director's designee. ELC and SLNG must file revisions to the plan as schedules change. The plan shall identify:

- a. how ELC and SLNG 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 SLNG 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 onsite construction and inspection personnel;
  - c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
  - d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
  - e. the location and dates of the environmental compliance training and instructions ELC and SLNG will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);
  - f. the company personnel (if known) and specific portion of ELC and SLNG's organization having responsibility for compliance;
  - g. the procedures (including use of contract penalties) ELC and SLNG will follow if noncompliance occurs; and
  - h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
    - (1) the completion of all required surveys and reports;
    - (2) the environmental compliance training of onsite personnel;
    - (3) the start of construction; and
    - (4) the start and completion of restoration.
7. ELC and SLNG shall employ at least one EI for the Project. The EI shall be:
- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;
  - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
  - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
  - d. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
  - e. responsible for maintaining status reports.

8. Beginning with the filing of its Implementation Plan, ELC and SLNG shall file updated status reports with the Secretary on a **monthly** basis until all construction and restoration activities are complete. Problems of a significant magnitude shall be reported to the FERC **within 24 hours**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
  - a. an update on ELC and SLNG's efforts to obtain the necessary federal authorizations;
  - b. project schedule, including current construction status of the project and work planned for the following reporting period;
  - c. a listing of all problems encountered, contractor nonconformance/deficiency logs, and each instance of noncompliance observed by the EI 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 and remedial actions implemented in response to all instances of noncompliance, nonconformance, or deficiency;
  - e. the effectiveness of all corrective and remedial actions implemented;
  - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the order, and the measures taken to satisfy their concerns; and copies of any correspondence received by ELC and SLNG from other federal, state, or local permitting agencies concerning instances of noncompliance, and ELC and SLNG's response.
9. ELC and SLNG must receive written authorization from the Director of OEP, or the Director's designee, **before commencing construction of any Project facilities**. To obtain such authorization, ELC and SLNG must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
10. ELC and SLNG must receive written authorization from the Director of OEP, or the Director's designee, **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.
11. ELC and SLNG must receive written authorization from the Director of OEP, or the Director's designee, **before placing into service** the Project facilities. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with FERC approval, can be expected to operate safely as designed, and the rehabilitation and restoration of areas affected by the project are proceeding satisfactorily.

12. **Within 30 days of placing the authorized facilities in service**, ELC and SLNG 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;
  - b. or identifying which of the conditions in the Order ELC and SLNG 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.
13. **Prior to construction of final design**, ELC and SLNG shall file with the Secretary the following information, stamped and sealed by the professional engineer-of-record, registered in the State of Georgia:
  - a. soil improvement procedures for the proposed project site;
  - b. site preparation drawings and specifications;
  - c. the corrosion control and prevention plan for any underground piping, structure, foundations, equipment, and components
  - d. finalized civil and structural design basis, criteria, specifications;
  - e. finalized wind and seismic design basis;
  - f. issued for Construction of LNG terminal structures and foundation design drawings and calculations (including prefabricated and field constructed structures);
  - g. quality control procedures to be used for civil/structural design and construction;
  - h. the total and differential settlement of final designed foundations for structures, systems, and components for the project site.

In addition, ELC and SLNG shall file, in its Implementation Plan, the schedule for producing this information.

**Information pertaining to the following specific conditions, shall be filed with the Secretary for review and written approval by the Director of OEP, or the Director's designee, within the timeframe indicated by each condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 833 (Docket No. RM16-15-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 CFR § 388.113. See Critical Electric Infrastructure Security and Amending Critical Energy Infrastructure Information, Order No. 833, 81 Fed. Reg. 93,732 (December 21, 2016), FERC Stats. & Regs. 31,389 (2016). Information pertaining to**

**items such as offsite 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.**

14. **Prior to initial site preparation**, ELC and SLNG shall file an overall Project schedule, which includes the proposed stages of initial site preparation, final design, procurement, construction, commissioning, introduction of hazardous fluids, and commencement of service.
15. **Prior to initial site preparation**, ELC and SLNG shall file procedures for controlling access during construction. The procedures shall address how unauthorized construction personnel will be restricted from entering the operational areas of the plant.
16. **Prior to initial site preparation**, ELC and SLNG shall file quality assurance and quality control procedures for construction activities, including initial equipment laydown receipt and preservation.
17. **Prior to initial site preparation**, ELC and SLNG shall develop an updated ERP (including evacuation and any sheltering and re-entry) and coordinate procedures with the Coast Guard; state, county, and local emergency planning groups; fire departments; state and local law enforcement; and other appropriate federal agencies. This plan shall be consistent with recommended and good engineering practices, as defined in National Fire Protection Association (NFPA) 1660, NFPA 470, NFPA 475, or approved equivalents, and based on potential impacts and onset of hazards from accidental and intentional events at the LNG terminal, including but not limited to a catastrophic rupture of the largest flowing pipe or vessel. This plan shall address any special considerations and pre-incident planning for infrastructure and public with access and functional needs and shall include at a minimum:
  - a. materials and plans for periodic dissemination of public education and training materials for evacuation and/or shelter in place of the public within LNG terminal hazard areas;
  - b. plans to competently train emergency responders required to effectively and safely respond to hazardous material incidents including, but not limited to, LNG fires and dispersion;
  - c. plans to competently train emergency responders to effectively and safely evacuate or shelter public within hazard areas from LNG terminal;
  - d. designated contacts with federal, state and local emergency response agencies responsible for emergency management and response within hazard areas from LNG terminal;

- e. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;
- f. scalable procedures for mobilizing response and establishing a unified command, including identification, location, and design of any emergency operations centers and emergency response equipment required to effectively and safely to respond to hazardous material incidents and evacuate or shelter public within LNG terminal hazard areas;
- g. scalable procedures for notifying public, including identification, location, design, and use of any permanent sirens or other warning devices required to effectively communicate and warn the public prior to onset of debilitating hazards within hazard areas from LNG terminal;
- h. scalable procedures for evacuating the public, including identification, location, design, and use of evacuation routes/methods and any mustering locations required to effectively and safely evacuate the public within hazard areas from LNG terminal; and
- i. scalable procedures for sheltering the public, including identification, location, design, and use of any shelters demonstrated to be needed and demonstrated to effectively and safely shelter the public prior to onset of debilitating hazards within hazard areas that may better benefit from sheltering in place.

ELC and SLNG shall notify the FERC staff of all planning meetings in advance and shall report progress on the development of its ERP **at three-month intervals**. ELC and SLNG shall file public versions of offsite emergency response procedures for public notification, evacuation, and shelter in place.

18. **Prior to initial site preparation**, ELC and SLNG shall file an updated Cost-Sharing Plan identifying the mechanisms for funding all Project-specific security/emergency management costs that would be imposed on state and local agencies. This comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. This plan shall include sustained funding of any requirement or resource gap(s) identified to effectively and safely evacuate and shelter the public and to effectively and safely respond to hazardous material incidents consistent with recommended and good engineering practices. ELC and SLNG shall notify FERC staff of all planning meetings in advance and shall report progress on the development of its Cost Sharing Plan at **three-month intervals**.
19. **Prior to initial site preparation**, ELC and SLNG shall file buried pipeline and utility damage prevention procedures for personnel and contractors. The

procedures shall include provisions to mark buried pipelines and utilities prior to any site work and subsurface activities.

20. **Prior to construction of final design**, ELC and SLNG shall file change logs that list and explain any changes made from the FEED provided in ELC and SLNG'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.
21. **Prior to construction of final design**, ELC and SLNG shall file information/revisions pertaining to ELC and SLNG's response numbers 27, 41 and 48 of their October 2, 2023 filing, which indicated features to be included or considered in the final design.
22. **Prior to construction of final design**, ELC and SLNG shall file change logs that list and explain any changes made from the FEED provided in ELC and SLNG'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.
23. **Prior to construction of the final design**, ELC and SLNG shall file a seismic monitoring program for the Project site. The seismic monitoring program shall comply with NFPA 59A (2019 edition) sections 8.4.14.10, 8.4.14.12, 8.4.14.12.1, 8.4.14.12.2, and 8.4.14.13; ACI 376 (2023 edition) sections 10.7.5 and 10.8.4; U.S Nuclear Regulatory Commission Regulatory Guide RG 1.12 (Revision 3) sections 1 and 3 through 9 and all subsections, or approved equivalents. A free-field seismic monitoring device shall be included in the seismic monitoring program for the Project site. Additional seismic instruments shall be considered for critical Structures, System, and Components. The proposed seismic monitoring system must include installation location plot plan; description of the triaxial strong motion recorders or other seismic instrumentation; the proposed alarm set points and operating procedures (including emergency operating procedures) for control room operators in response to such alarms/data obtained from seismic instrumentation; and testing and maintenance procedures.
24. **Prior to construction of final design**, ELC and SLNG shall file drawings of vehicle protections internal to the plant, such as guard rails, barriers, and bollards to protect transfer piping, pumps, compressors, hydrants, monitors, post indicator valves, etc. to ensure that the facilities would be protected from inadvertent damage from vehicles, unless the facilities are located sufficiently away from in-plant roadways and areas accessed by vehicle.

25. **Prior to construction of final design,** ELC and SLNG shall file updated drawings of the security fence that reflects the most up to date plot plan. The fencing drawings shall provide details of fencing that demonstrate it is in accordance with NFPA 59A (2019 edition) and would restrict and deter access around the entire facility and have a setback from exterior features (e.g., power lines, trees, etc.) and from interior features (e.g., piping, equipment, buildings, etc.) by at least 10 feet and that would not allow the fence to be overcome.
26. **Prior to construction of final design,** ELC and SLNG shall file a photometric analyses or equivalent and associated lighting drawing(s) for the condensate plant area. The lighting drawing(s) shall show the location, elevation, type of light fixture, and lux levels of the lighting system and shall depict illumination coverage in accordance with federal regulations (e.g., 49 CFR Part 193, 29 CFR Part 1910, and 29 CFR Part 1926) and API 540 or approved equivalent.
27. **Prior to construction of final design,** ELC and SLNG shall file a plot plan of the final design showing all major equipment, structures, buildings, and impoundment systems.
28. **Prior to construction of final design,** ELC and SLNG shall file three-dimensional plant drawings of the condensate plant to confirm plant layout for maintenance, access, egress, and the extent and density of congested areas used in overpressure modeling.
29. **Prior to construction of final design,** ELC and SLNG shall file up-to-date process flow diagrams (PFDs), heat and mass balances (HMBs), and piping and instrument diagrams (P&IDs) including vendor P&IDs. The HMBs shall demonstrate a peak export rate of 2.9 million metric tonnes per annum. The P&IDs shall 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.

30. **Prior to construction of final design**, ELC and SLNG shall file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities.
31. **Prior to construction of final design**, ELC and SLNG shall file P&IDs, specifications, and procedures that clearly show and specify the tie-in details required to safely connect subsequently constructed facilities with the operational facilities.
32. **Prior to construction of final design**, ELC and SLNG shall file information to verify how the EPC contractor has addressed all FEED HAZID recommendations.
33. **Prior to construction of final design**, ELC and SLNG shall file a hazard and operability (HAZOP) and any layer of protection analysis (LOPA) or safety integrity level (SIL) verification studies of the final design P&IDs, a list of the resulting recommendations, and action taken on the recommendations. The issued for construction P&IDs shall incorporate the HAZOP review and any LOPA or SIL verification studies recommendations and justification shall be provided for any recommendations that are not implemented.
34. **Prior to construction of final design**, ELC and SLNG shall file the safe operating limits (upper and lower), alarm and shutdown set points for all instrumentation (e.g., temperature, pressures, flows, and compositions).
35. **Prior to construction of final design**, ELC and SLNG shall file 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.
36. **Prior to construction of final design**, ELC and SLNG shall specify that all ESD valves are to be equipped with open and closed position switches connected to the Distributed Control System (DCS)/safety instrument system (SIS).
37. **Prior to construction of final design**, ELC and SLNG shall file an up-to-date equipment list, process and mechanical data sheets, and specifications. The specifications shall include:
  - a. building specifications (e.g., control buildings, electrical buildings, compressor buildings, storage buildings, pressurized buildings, ventilated buildings, blast resistant buildings);

- b. mechanical specifications (e.g., piping, valve, insulation, rotating equipment, heat exchanger, storage tank and vessel, other specialized equipment);
  - c. electrical and instrumentation specifications (e.g., power system, control system, SIS, cable, other electrical and instrumentation); and
  - d. security and fire safety specifications (e.g., security, passive protection, hazard detection, hazard control, firewater).
38. **Prior to construction of final design**, ELC and SLNG shall file a final list of all applicable codes and standards that will be used in the final design, fabrication, construction, commissioning, inspection, testing, operation and maintenance of the Project facilities, systems, and components that cross references the final specifications and document numbers.
39. **Prior to construction of final design**, ELC and SLNG shall file an evaluation of emergency shutdown valve closure times. The evaluation shall account for the time to detect an upset or hazardous condition, notify plant personnel, and close the emergency shutdown valve(s).
40. **Prior to construction of final design**, ELC and SLNG shall file an evaluation of dynamic pressure surge effects from valve opening and closure times and pump operations that demonstrate that the surge effects do not exceed the design pressures or pipe support design loads.
41. **Prior to construction of final design**, ELC and SLNG shall file a pipe stress analysis for critical or potential higher consequence lines that evaluates all loads in ASME B31.3 (2020 edition), including but not limited to consideration of hazardous fluid lines that are cryogenic, high temperature, subject to slug flow, and that include two-phase flow. ELC and SLNG shall also demonstrate, for hazardous fluids, piping and piping nipples two 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.
42. **Prior to construction of final design**, ELC and SLNG shall file the sizing basis and capacity for the final design of the flares and/or vent stacks as well as the pressure and vacuum relief valves for major process equipment, vessels, and storage tanks. Additionally, sizing basis shall be provided for pressure relief valves protecting from overpressures due to mixed refrigerant compressor blocked outlet cases, and basis for necessity of thermal relief valves in non-cryogenic process piping.

43. **Prior to construction of final design**, ELC and SLNG shall specify that the common, non-spared process vessels are installed with spare pressure relief valves to ensure overpressure protection during relief valve testing or maintenance.
44. **Prior to construction of final design**, ELC and SLNG shall file an updated fire protection evaluation of the proposed facilities. A copy of the evaluation, a list of recommendations and supporting justifications, and actions taken on the recommendations shall be filed. The evaluation shall justify the type, quantity, and location of hazard detection and hazard control, passive fire protection, emergency shutdown and depressurizing systems, firewater, and emergency response equipment, training, and qualifications in accordance with NFPA 59A (2001). The justification for the flammable and combustible gas detection and flame and heat detection systems shall be in accordance with ISA 84.00.07 or approved equivalent methodologies and would need to demonstrate 90% or more of releases (unignited and ignited) that could result in an off-site or cascading impact would be detected by two or more detectors and result in isolation and de-inventory within 10 minutes. The analysis shall take into account the set points, voting logic, wind speeds, and wind directions. The justification for firewater shall provide calculations for all firewater demands based on design densities, surface area, and throw distance as well as specifications for the corresponding hydrant and monitors needed to reach and cool equipment.
45. **Prior to construction of final design**, ELC and SLNG shall file spill containment system drawings with dimensions and slopes of curbing, trenches, impoundments, tertiary containment and capacity calculations considering any foundations and equipment within impoundments. The spill containment drawings shall show containment for all hazardous fluids including all liquids handled above their flashpoint, from the largest flow from a single line for 10 minutes, including de-inventory, or the maximum liquid from the largest vessel (or total of impounded vessels) or otherwise demonstrate that providing spill containment would not significantly reduce the flammable vapor dispersion or radiant heat consequences of a spill.
46. **Prior to construction of final design**, ELC and SLNG shall file electrical area classification drawings, including cross sectional drawings. The drawings shall demonstrate compliance with NFPA 59A, NFPA 70, NFPA 497, and API RP 500, or approved equivalents. In addition, the drawings shall include revisions to the electrical area classification design or provide technical justification that supports the electrical area classification using most applicable API RP 500 figures (i.e.,

figures 20 and 21) or hazard modeling of various release rates from equivalent hole sizes and wind speeds (see NFPA 497 release rate of 1 lb-mole/minute).

47. **Prior to construction of final design,** ELC and SLNG shall file 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 NFPA 59A (2001) and NFPA 70 (1999 or 2020, as applicable).
48. **Prior to construction of final design,** ELC and SLNG shall file details of 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, alarm the hazardous condition, and shut down the appropriate systems. Alternatively, ELC and SLNG shall file details on a system providing an approved equivalent protection, in accordance with NFPA 59A (2023 edition), from the migration of flammable fluid through the electrical conduit or wiring.
49. **Prior to construction of final design,** ELC and SLNG shall file complete drawings and a list of the hazard detection equipment. The drawings shall clearly show the location and elevation of all detection equipment as well as their coverage area. The list shall include the instrument tag number, type, manufacturer, model, location, alarm indication locations, and shutdown functions of the hazard detection equipment.
50. **Prior to construction of final design,** ELC and SLNG shall file an evaluation of the voting logic and voting degradation for hazard detectors.
51. **Prior to construction of final design,** ELC and SLNG shall file a list of alarm and shutdown set points for all hazard detectors that account for the calibration gas of the hazard detectors when determining the set points that are intended to detect different gases or mixtures than the calibration gas.
52. **Prior to construction of final design,** ELC and SLNG shall file drawings and specifications detailing the installation of low oxygen detection in the nitrogen vaporizer area.
53. **Prior to construction of final design,** ELC and SLNG shall file a drawing showing the location of the emergency shutdown buttons associated with the

Project. Emergency shutdown buttons shall be easily accessible, conspicuously labeled, and located in an area which would be accessible during an emergency.

54. **Prior to construction of final design**, ELC and SLNG shall file facility plan drawings and a list of the fixed and wheeled dry-chemical, hand-held fire extinguishers, and other hazard control equipment. Plan drawings shall clearly show the location and elevation by tag number of all fixed, wheeled, and hand-held extinguishers and shall demonstrate the spacing of extinguishers meet prescribed NFPA 10 travel distances. The list shall include the equipment tag number, type, manufacturer and model, capacity, equipment covered, discharge rate, and automatic and manual remote signals initiating discharge of the units and shall demonstrate they meet NFPA 59A.
55. **Prior to construction of final design**, ELC and SLNG shall file drawings and specifications for new and relevant existing structural passive protection systems to protect equipment and supports from pool fires and from jet fires of design spills that may exacerbate the initial hazard, as well as electrical, instrument, and control equipment, which would activate emergency systems or would be relied upon for isolation to withstand a minimum 20-minute fire exposure, per UL 1709 (6th edition) or approved equivalent.
56. **Prior to construction of final design**, ELC and SLNG shall file a detailed quantitative analysis to demonstrate that adequate mitigation would be provided for each pressure vessel that could fail within the 4,000 BTU/ft<sup>2</sup>-hr zone from pool or jet fires; each critical structural component and emergency equipment item that could fail within the 4,900 BTU/ft<sup>2</sup>-hr zone from a pool or jet fire that could exacerbate the hazard. A combination of passive and active protection for pool fires and passive and/or active protection for jet fires shall be provided and demonstrate the effectiveness and reliability. Effectiveness of passive mitigation shall be supported by calculations or test results for the thickness limiting temperature rise over the fire duration, and active mitigation shall be supported by reliability information by calculations or test results, such as demonstrating flow rates and durations of any cooling water would mitigate the heat absorbed by the component. The total firewater demand shall account for all components that could fail due to a pool or jet fire.
57. **Prior to construction of final design**, ELC and SLNG shall file an analysis that evaluates and optimizes the firewater layout at the southern side of the Condensate Plant to provide adequate monitor coverage for any equipment whose failure could exacerbate the initial hazard, or alternatively demonstrate that equivalent or

adequate fire mitigation would be provided. The firewater coverage shall be provided by at least two monitors or hydrants in the event that the fire prohibits the ability to use the one or more of the monitor(s) and/or hydrant(s).

58. **Prior to construction of final design**, ELC and SLNG shall file an analysis that demonstrates jet fire impacts on the main pipe rack due to release scenarios (e.g., design spills) from the Condensate Plant would not lead to failure of the structural steel or hazardous fluid containing lines within the main pipe rack that would exacerbate the initial hazard.
59. **Prior to construction of final design**, ELC and SLNG shall file facility plan drawings showing the proposed location of the firewater systems. Plan drawings shall clearly show the location of firewater piping, post indicator and sectional valves, and the location and area covered by, each monitor, hydrant, hose, water curtain, deluge system, water-mist system, and sprinkler. The drawings shall demonstrate that each process area, fire zone, or other sections of piping with several users can be isolated with post indicator or sectional valves in accordance with NFPA 24 (2022 edition) or approved equivalent, and that firewater coverage is provided by at least two monitors or hydrants with sufficient firewater flow to cool exposed surfaces subjected to a fire. The drawings shall also include piping and instrumentation diagrams of the firewater systems.
60. **Prior to commissioning**, ELC and SLNG shall file an updated maintenance plan for the storm surge wall. The maintenance plan shall include annual elevation survey plan for the storm surge wall and shall consider relative sea level rise and settlements at the project site.
61. **Prior to construction of the final design**, ELC and SLNG shall file 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 SLNG 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.
62. **Prior to commissioning**, ELC and SLNG shall file detailed plans and procedures for: testing the integrity of onsite mechanical installation; functional tests; introduction of hazardous fluids; operational tests; and placing the equipment into service.

63. **Prior to commissioning**, ELC and SLNG shall file the operation and maintenance procedures and manuals, as well as safety procedures, hot work procedures and permits, abnormal operating conditions procedures, simultaneous operations procedures, and management of change procedures and forms. The operational maintenance and testing procedures for fire protection components shall be in accordance with NFPA 59A (2019) or approved equivalent.
64. **Prior to commissioning**, ELC and SLNG shall file 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, and shall provide justification if not using an inert or non-flammable gas for clean-out, dry-out, purging, and tightness testing.
65. **Prior to commissioning**, ELC and SLNG shall tag all equipment, instrumentation, and valves in the field, including drain valves, vent valves, main valves, and car-sealed or locked valves.
66. **Prior to commissioning**, ELC and SLNG shall file a plan to maintain a detailed training log to demonstrate that all staff have completed all required training for operating, maintenance, safety, security, and emergency response. In addition, ELC and SLNG shall file signed documentation that demonstrates training has been conducted, including ESD and response procedures, prior to the respective operation.
67. **Prior to commissioning**, ELC and SLNG shall file the procedures for pressure/leak tests which address the requirements of ASME BPVC Section VIII and ASME B31.3. In addition, ELC and SLNG shall file a line list of pneumatic and hydrostatic test pressures.
68. **Prior to introduction of hazardous fluids**, ELC and SLNG shall complete and document a pre-startup safety review to ensure that installed equipment meets the design and operating intent of the facility. The pre-startup safety review shall include any changes since the last hazard review, operating procedures, and operator training. A copy of the review with a list of recommendations, and actions taken on each recommendation, shall be filed.
69. **Prior to introduction of hazardous fluids**, ELC and SLNG shall complete and document all pertinent tests (Factory Acceptance Tests, Site Acceptance Tests, Site Integration Tests) associated with the DCS and SIS that demonstrates full functionality and operability of the system.

70. **Prior to introduction of hazardous fluids**, ELC and SLNG shall file an updated alarm management program to maximize the effectiveness of operator response to alarms in accordance with ISA 18.2 (2016 edition) or approved equivalent.
71. **Prior to introduction of hazardous fluids**, ELC and SLNG shall complete and document 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).
72. **Prior to commencement of service**, ELC and SLNG shall notify the FERC staff of any proposed revisions to the security plan and physical security of the plant.
73. **Prior to commencement of service**, ELC and SLNG shall label piping with fluid service and direction of flow in the field, consistent with ASME A13.1 (2020 edition) or approved equivalent, in addition to the pipe labeling requirements of NFPA 59A (2001).
74. **Prior to commencement of service**, ELC and SLNG shall provide plans for any preventative and predictive maintenance program that performs periodic or continuous equipment condition monitoring.
75. **Prior to commencement of service**, ELC and SLNG shall develop and file procedures for offsite contractors' responsibilities, restrictions, monitoring, training, and limitations and for supervision of these contractors and their tasks by ELC and SLNG staff. Specifically, the procedures shall address:
  - a. selecting a contractor, including obtaining and evaluating information regarding the contract employer's safety performance and programs.
  - b. informing contractors of the known potential hazards, including flammable and toxic release, explosion, and fire, related to the contractor's work and systems they are working on.
  - c. developing and implementing provisions to control and monitor the entrance, presence, and exit of contract employers and contract employees from process areas, buildings, and the plant.
  - d. developing and implementing safe work practices for control of personnel safety hazards, including lockout/tagout, confined space entry, work permits, hot work, and opening process equipment or piping.
  - e. developing and implementing safe work practices for control of process safety hazards, including identification of layers of protection in systems being worked on, recognizing abnormal conditions on systems they are

- working on, and re-instatement of layers of protection, including ensuring bypass, isolation valve, and car-seal programs and procedures are being followed.
- f. developing and implementing provisions to ensure contractors are trained on the emergency action plans and that they are accounted for in the event of an emergency.
  - g. monitoring and periodically evaluating the performance of contract employers in fulfilling their obligations above, including successful and safe completion of work and re-instatement of all layers of protection.

**In addition, the following measures shall apply throughout the life of the Elba Liquefaction Optimization Project.**

76. 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 SLNG 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.
77. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions; abnormal operating experiences; activities (e.g., ship arrivals, quantity and composition of imported and exported LNG, liquefied and vaporized quantities, boil off/flash gas); and plant modifications, including future plans and progress thereof. Abnormalities shall include, but not be limited to, unloading/loading/shipping problems, potential hazardous conditions from offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tank, 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 would provide the FERC staff with early notice of anticipated future construction/maintenance at the LNG facilities.

78. 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 the FERC staff. In the event that 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 the **FERC staff within 24 hours**. This notification practice shall be incorporated into the liquefaction 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 five minutes or more;
  - f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes hazardous fluids;
  - g. any crack or other material defect that impairs the structural integrity or reliability of an 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% 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 from hazardous fluids transportation occurring at or en route to and from the LNG facility; or
- m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

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