

120 FERC ¶ 61,259
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Calhoun LNG, L.P.

Docket No. CP05-91-000

Point Comfort Pipeline Company, L.P.

Docket Nos. CP05-380-000
CP05-381-000
CP05-382-000

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

(Issued September 20, 2007)

1. On March 18, 2005, in Docket No. CP05-91-000, Calhoun LNG, L.P. (Calhoun) filed an application under section 3 of the Natural Gas Act (NGA), requesting authority to site, construct, and operate a liquefied natural gas (LNG) import terminal and associated facilities at the Port of Port Lavaca-Point Comfort in Calhoun County, Texas.¹
2. On June 10, 2005, in Docket No. CP05-380-000, Point Comfort Pipeline Company, L.P. (Point Comfort) filed an application under section 7(c) of the NGA, requesting authority to construct and operate a pipeline, known as the Point Comfort Pipeline, from the tailgate of Calhoun's proposed LNG terminal to various interstate and intrastate pipelines. In addition, in Docket Nos. CP05-381-000 and CP05-382-000, respectively, Point Comfort requests authority under section 7(c) to provide open-access firm and interruptible transportation service under subpart G of Part 284 of the regulations and for a blanket construction certificate under subpart F of Part 157 of the regulations.

¹ Originally, Calhoun's application included a request to construct and operate a 12-mile long, 30-inch diameter non-jurisdictional pipeline. On March 21, 2005, Calhoun withdrew its request for authority to construct these facilities.

3. This order grants Calhoun's proposals to construct and operate an LNG import terminal under section 3 and Point Comfort's proposals to construct pipeline facilities under section 7(c), with appropriate conditions, as discussed below.

I. Background

4. Calhoun is a Delaware limited partnership with Calhoun LNG GP, LLC (Calhoun LNG GP) as the general partner and Gulf Coast LNG Partners, L.P. (GCLP) as the limited partner. Calhoun LNG GP is a Delaware limited liability company whose sole member is GCLP. GCLP is a Delaware limited partnership with Gulf Coast LNG Partners, L.P., a Delaware limited liability company, and Haddington LNG GP, LLC, a Delaware limited liability company, as the general partners.

5. Point Comfort is a newly formed pipeline company that does not own any existing pipeline facilities and is not currently engaged in any natural gas operations. Point Comfort is a Delaware limited partnership with Point Comfort Pipeline Company GP, LLC as the general partner and Haddington Ventures, LLC, a Delaware limited liability company, and Gulf Coast LNG, LLC, a Texas limited liability company, as limited partners.

II. Proposals

6. The Calhoun LNG Project will receive, store, and vaporize foreign-source LNG. The vaporized LNG will then be sent out through the terminal facilities to the proposed Point Comfort pipeline at a single point within the boundaries of the terminal, for delivery to two industrial customers, as well as to nine intrastate and interstate pipelines, as described below. Calhoun and Point Comfort were formed solely to develop, construct, own, operate, and maintain the terminal and the pipeline, respectively.

A. Calhoun's Proposal

7. Calhoun seeks authorization under section 3 to site, construct, and operate: (1) an LNG receiving facility (including docking and unloading facilities, piping, and appurtenances); (2) an LNG storage and vaporization facility (including two single containment 160,000 cubic meters (m³) LNG storage tanks, vaporization units, and associated piping and control equipment); and (3) associated utilities, infrastructure, and support systems. The marine terminal will have the capability of receiving 75,000 m³ to 220,000 m³ ships. Calhoun anticipates receiving and unloading approximately 120 ships per year. The project will be designed for an installed gas send-out capacity of 1.0 billion cubic feet (Bcf) per day. Calhoun states that the vaporization equipment at the LNG terminal will be capable of regasifying the LNG to yield commercial quality natural gas

for send-out and delivery into the intrastate and interstate natural gas pipeline grid.²

8. Calhoun proposes to construct the LNG terminal and associated facilities between Lavaca Bay and Cox Bay in Calhoun County, Texas (i.e., the Port of Port Lavaca - Point Comfort). The project site is on an 88.9-acre tract of man-made land owned and operated by the Calhoun County Navigation District, a political subdivision of the State of Texas, and leased to Calhoun. Construction and operation of the terminal will require approximately 73 acres.

B. Point Comfort's Proposals

1. Facilities

9. Point Comfort requests authority under section 7(c) to construct and operate approximately: (1) 27.1 miles of 36-inch diameter pipeline extending from Calhoun's LNG terminal north to interconnects with various pipelines before ending at a connection with Tennessee Gas Pipeline Company (Tennessee) approximately three miles southwest of Edna, in Jackson County, Texas; (2) 0.25 mile of 8-inch diameter lateral pipeline from the Point Comfort Pipeline to Formosa Hydrocarbons (the Formosa Lateral), a local industry; (3) 0.25 mile of 16-inch diameter lateral pipeline from the Point Comfort Pipeline to Transcontinental Gas Pipe Line Corporation's meter station (the Transco Lateral); (4) ten delivery points with nine interstate and intrastate pipelines; and (5) associated pipeline facilities, including pig launcher and receiver facilities and three mainline valves. No compressor facilities are planned. The pipeline facilities are designed for a maximum daily deliverability of 1.0 Bcf per day at an operating pressure of 1,000 psi.

10. Point Comfort will receive natural gas at a metering station within the boundaries of Calhoun's LNG terminal site. Point Comfort will transport the regasified LNG from the import terminal to two local industries (Formosa Hydrocarbons and Formosa Plastics) and to interconnections with four intrastate pipeline companies (Channel/Houston Pipe Line JV Pipeline, Kinder Morgan-Tejas Pipeline Company, Enterprise-Valero Pipeline Company, and Kinder Morgan Texas Pipeline Company) and five interstate pipeline

² Calhoun also proposes to construct a non-jurisdictional natural gas liquids recovery system to be owned by Formosa Hydrocarbons Company (Formosa Hydrocarbons) at the LNG terminal to extract ethane, propane, and butane from the LNG stream. In addition, American Electric Power will construct a 0.7-mile long, 138-kilovolt overhead electrical line to provide electricity to the proposed LNG terminal. There are no other non-jurisdictional facilities associated with Calhoun's proposals.

companies (Florida Gas Transmission Company, Gulf South Pipeline Company, LP, Natural Gas Pipeline of America [Natural], Transco, and Tennessee).³

11. The construction of the Point Comfort pipeline will impact 416.6 acres of land, including construction right-of-way for the pipeline and laterals, temporary workspaces, access roads, and contractor staging areas. Once in operation, the pipeline will require approximately 99.4 acres for the permanent easement for the pipeline, 0.8 and 0.9 acre for the easement along the Formosa and Transco Laterals, respectively, 3.5 acres for meter station sites and other above-ground facilities, and 2.9 acres for access roads. Approximately 25.2 miles of the Point Comfort pipeline route will be adjacent to existing rights-of-way. The Formosa Lateral will be adjacent to existing rights-of-way for 0.2 mile and the Transco Lateral will be adjacent to existing rights-of-way for its entire length.

12. Point Comfort states that it conducted an open season from August 15, 2005 to September 14, 2005. As a result of the open season, Point Comfort asserts that Texana Marketing, L.P. (Texana Marketing) submitted a bid for 1,050,000 dekatherms (Dth) per day of capacity, the thermal equivalent of the fuel capacity of the line. Point Comfort states that it entered into a binding precedent agreement with Texana Marketing for all of the capacity of the Point Comfort Pipeline.

2. Rates

13. Point Comfort estimates that its proposed pipeline will cost \$62,582,000. Point Comfort proposes to offer cost-based firm (Rate Schedule FTS), interruptible (Rate Schedules ITS), and parking and lending service (Rate Schedule PALS) transportation services on an open-access, non-discriminatory basis under Part 284 of the regulations.⁴ Point Comfort states that the proposed cost-based rates reflect a straight fixed-variable rate design. The cost of service is levelized by adjusting the annual depreciation expense over a 20-year period. Point Comfort states that it may offer negotiated rates as an option pursuant to section 30 of the General Terms and Conditions of its pro forma tariff.

³ Point Comfort also contemplates constructing a 12-inch diameter non-jurisdictional natural gas liquids pipeline that will parallel the proposed Point Comfort pipeline for approximately 1.7 miles from Calhoun's LNG terminal to the Formosa Hydrocarbons facility.

⁴ See Point Comfort's FERC Gas Tariff, Original Volume No. 1.

14. The proposed FTS rate is derived using the annual levelized cost of service⁵ of \$11,093,142 and the annual FTS reservation billing determinants of 12,600,000 Dth, based on Point Comfort's maximum daily design capacity. The proposed maximum cost-based FTS reservation rate is \$0.8804 per Dth. Point Comfort states that it currently has no variable costs, so the proposed FTS usage rate is \$0 per Dth.

15. The ITS rate is derived at a 100 percent load factor of the FTS rate. Point Comfort has not identified any usage determinants associated with its proposed ITS service. The proposed maximum ITS rate is \$0.0289 per Dth. The same rate is proposed for PALS service. For both its firm and interruptible services, Point Comfort estimates a 0.2 percent retainage for lost and unaccounted-for gas.

3. Requests for Blanket Certificates

16. Point Comfort requests a blanket certificate under subpart G of Part 284 in order to provide firm and interruptible transportation services for its customers. Point Comfort also requests a blanket certificate under subpart F of Part 157 in order to perform routine construction, maintenance, and operational activities related to its proposals.

III. Interventions

17. Notice of the Calhoun's application in Docket No. CP05-91-000 was published in the *Federal Register* on April 5, 2005 (70 Fed. Reg. 17,241). The parties in Appendix A filed timely, unopposed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214.⁶

18. Notice of Point Comfort's application in Docket Nos. CP05-380-000, CP05-381-000, and CP05-382-000 was published in the *Federal Register* on June 24, 2005 (70 Fed.

⁵ Point Comfort's proposed year-one cost of service consists of \$563,238 of operation and maintenance expenses, \$500,656 of administrative and general expenses, \$756,180 of depreciation expenses, \$6,305,329 of return allowance (at a 14 percent rate of return on equity, based on a capital structure of 30 percent equity and 70 percent debt and 8.50 percent cost of debt), \$1,454,969 of federal income taxes (calculated at a tax rate of 35 percent) and \$1,512,770 of taxes other than income taxes, for a total cost of service of \$11,093,142. For year one, Point Comfort reflects a proposed rate base comprising gross plant investment of \$62,582,000, less accumulated depreciation of \$378,090, less accumulated deferred income taxes of \$396,874, plus working capital of \$39,427, for a total rate base of \$61,846,462.

⁶ See 18 C.F.R. § 385.214(c) (2007).

Reg. 36,578). Alcoa Inc. (Alcoa) and Natural filed timely, unopposed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214.⁷

19. Alcoa and Natural filed untimely motions to intervene in Docket No. CP05-91-000. John Eisman filed an untimely motion to intervene in Docket Nos. CP05-380-000, CP05-381-000, and CP05-382-000. Alcoa, Natural, and Mr. Eisman have demonstrated an interest in this proceeding and have shown good cause for intervening out of time. Further, the untimely motions to intervene will not delay, disrupt, or otherwise prejudice this proceeding. Thus, we will grant the untimely motions to intervene.

IV. Notice of the Application

20. Mr. Eisman protested Point Comfort's application, contending that Point Comfort failed to provide him with adequate notice of the application. Specifically, Mr. Eisman claims that he did not receive notice until June 28, 2005. Mr. Eisman asserts that he should have been notified within three days of the filing of the application with the Commission. In response, Point Comfort asserts that it complied with the Commission's notice requirements.

21. Section 157.6(d)(1) of the regulations provides that an "applicant shall make a good faith effort to notify all affected landowners . . . [b]y certified or first class mail, sent within [three] business days following the date the Commission issues a notice of the application." Here, we issued the notice of Point Comfort's application on Friday, June 17, 2005. Point Comfort sent the notice to Mr. Eisman by certified mail on Wednesday, June 22, which is within three business days following the date the Commission issued the notice. Thus, we conclude that Point Comfort complied with the notice requirements contained in section 157.6 of the regulations.

V. Discussion

A. Calhoun LNG's Proposed Terminal

22. Because the proposed LNG terminal facilities will be used to import gas from foreign countries, the construction and operation of the facilities and site of their location require approval by the Commission under section 3 of the NGA.⁸ The

⁷ *Id.*

⁸ The regulatory functions of section 3 were transferred to the Secretary of Energy in 1977 pursuant to section 301(b) of the Department of Energy Organization Act (Pub. L. No. 95-91, 42 U.S.C. §§7101 *et seq.*). In reference to regulating the imports or exports
(continued.....)

Commission's authority over facilities constructed and operated under section 3 includes the authority to apply terms and conditions as necessary and appropriate to ensure that the proposed construction and siting is in the public interest.⁹ Section 3 provides that the Commission "shall issue such order on application . . ." if it finds that the proposal "will not be inconsistent with the public interest."

23. In recent years, we have chosen to exercise a less intrusive degree of economic regulation for LNG import terminals, and have not required the applicant to offer open-access service or to maintain a tariff or rate schedules for its terminalling service.¹⁰ On August 8, 2005, the Energy Policy Act of 2005 (EPAAct 2005) was signed into law.¹¹ Section 311 of EPAAct 2005 amends section 3 of the NGA regarding the Commission's authority over the siting, construction, expansion or operation of an LNG terminal.¹² As pertinent here, section 311(c) of EPAAct 2005 adds a new NGA section 3(e)(3) providing that, before January 1, 2015, the Commission shall not condition an order approving an application to site, construct, expand or operate an LNG terminal: (1) on a requirement that the LNG terminal offer service to customers other than the applicant, or any affiliate of the applicant securing the order; (2) on any regulation of the rates, charges, terms or conditions of service of the LNG terminal; or (3) a requirement to file schedules or contracts related to the rates, charges, terms, or conditions of service of the LNG terminal. Our authorization here is consistent with section 3(e)(3).

of natural gas, the Secretary subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of particular facilities, the site at which facilities shall be located, and with respect to natural gas that involves the construction of new domestic facilities, the place of entry or exit for exports. The most recent delegation is in DOE Delegation Order No. 00-044.00A, effective May 16, 2006. Accordingly, applications for authority to import natural gas must be submitted to the Department of Energy. The Commission does not authorize importation of the commodity itself.

⁹ *Distrigas Corp. v. FPC*, 495 F.2d 1057, 1063-64 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974); *Dynegy LNG Production Terminal, L.P.*, 97 FERC ¶ 61,231 (2001).

¹⁰ *See Hackberry LNG Terminal, L.L.C.*, 101 FERC ¶ 61,294 (2002) (*Hackberry*), *order issuing certificates and granting reh'g*, 104 FERC ¶ 61,269 (2003).

¹¹ Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

¹² Energy Policy Act of 2005, Pub. L. No. 109-58, § 311, 119 Stat. 594 (2005).

24. We recognize the important role that LNG will play in meeting future demand for natural gas in the United States and note that the public interest is served through encouraging gas-on-gas competition by introducing new imported supplies.¹³ The record in this case shows that Calhoun's proposed LNG terminal will provide such additional supplies of natural gas to consumers. Because the project is new, Calhoun has no existing customers who might be adversely affected by the costs or risk of recovery of the costs associated with the proposed LNG terminal project. The economic risks will be borne by Calhoun. Further, the environmental conditions set forth in this order will ensure that the adverse environmental impacts will be limited. Thus, we find that, subject to the conditions imposed in this order, Calhoun's proposed LNG terminal is not inconsistent with the public interest.

B. Point Comfort's Proposed Pipeline

25. Since the proposed pipeline facilities will be used to transport natural gas in interstate commerce subject to the jurisdiction of the Commission, the construction and operation of the facilities are subject to the requirements of subsections (c) and (e) of section 7 of the NGA.

1. The Certificate Policy Statement

26. The Certificate Policy Statement provides guidance as to how the Commission will evaluate proposals for certificating new construction.¹⁴ The Certificate Policy Statement established criteria for determining whether there is a need for the proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explained that in deciding whether to authorize the construction of major new pipeline facilities, we balance the public benefits against the potential adverse consequences. Our goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating new pipeline construction.

27. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from the existing customers. The next step is to determine whether the

¹³ *Hackberry*, 101 FERC ¶ 61,294, at P 26 (2002).

¹⁴ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999); *order on clarification*, 90 FERC ¶ 61,128 (2000); *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of a new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, we will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will we proceed to complete the environmental analysis where other interests are considered.

28. The threshold requirement is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. Here, Point Comfort is a new pipeline and has no existing customers. Thus, there will be no subsidization. For this reason, we find that Point Comfort has satisfied the threshold requirement of the Certificate Policy Statement.

29. In addition, there will be no adverse effect on existing services because Point Comfort has no current customers. The new pipeline should also benefit interconnecting pipelines by providing new sources of gas for them to transport. Further, no existing shippers or pipelines in the area have protested the filing. Finally, Point Comfort proposes to construct 93.2 percent of the pipeline along existing rights-of-way. No landowner or community member objected to the proposed pipeline route. For these reasons, we find that any adverse impacts on existing pipelines, landowners, and communities will be minimal.

30. The need for the Point Comfort pipeline is supported by historic and projected trends in gas demand and supply. National and industry organizations that monitor energy consumption trends forecast a growing demand for natural gas. The data shows that domestic production will be unable to keep pace with demand. It is expected that imports, including LNG, will be necessary to make up the supply gap. The Point Comfort pipeline will provide access to new, competitively priced LNG supplies at Calhoun's LNG terminal to meet this growing demand. Based on the benefits Point Comfort's proposals will provide to the market and the lack of any identified adverse effect on existing customers, other pipelines, landowners, or communities, we find, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of Point Comfort's proposals.

2. Blanket Certificates

31. Point Comfort requests authority for a Part 284, subpart G, blanket certificate in order to provide open-access transportation services. We will grant Point Comfort's request for a Part 284 blanket certificate, subject to the conditions imposed below.

32. Point Comfort also requests authority for a Part 157, subpart F, blanket certificate. Under a subpart F blanket certificate, a pipeline may construct and operate certain facilities without filing a case-specific application for a certificate under section 7(c) of the NGA. Point Comfort will become an interstate pipeline once it accepts the certificate to construct and operate the facilities issued in this order and it has stated in its application that it will comply with the provisions of subpart F of Part 157. Thus, we will issue a blanket construction certificate to Point Comfort.

3. Rates

a. Initial Rates

33. We reviewed Point Comfort's proposed cost of service and initial rates and generally find them reasonable for a new pipeline entity. In the past, we have approved levelized cost of service rate designs, finding that they provide just and reasonable rates.¹⁵ We will also approve them here.

b. Return on Equity and Capital Structure

34. Although it has made no firm financing arrangements, Point Comfort anticipates that 30 percent of its capital will be furnished by the owners as equity and that 70 percent will consist of debt. Assuming this debt level, Point Comfort expects to raise approximately \$43.8 million of debt from sources such as commercial banks or insurance companies, or both, at an effective interest rate of 8.5 percent to be retired over a period of 15 years. Point Comfort states that the terms and conditions applicable to the debt will depend upon the financial market conditions existing at the time the debt is raised, but that it will seek the most favorable terms available in the marketplace at the time of financing, and that it will be non-recourse debt. Point Comfort also proposes a 14 percent return on equity based on such factors as its form of incorporation, project risks, proposed capital structure, and anticipated capital market conditions.

35. In recent projects, we have approved a capital structure of 70 percent debt and 30 percent equity, as well as a return on equity of 14 percent.¹⁶ We find that Point Comfort's proposal to finance the proposed project is consistent with these projects.

¹⁵ See *Tractebel Calypso Pipeline, LLC*, 103 FERC ¶ 61,106 (2003); *Millennium Pipeline Company L.P.*, 97 FERC ¶ 61,292, at 62,322 (2002).

¹⁶ See, e.g., *Cheniere Creole Trail Pipeline, L.P.*, 115 FERC ¶ 61,331 (2006); *Tractebel Calypso Pipeline, LLC*, 103 FERC ¶ 61,106 (2003).

Thus, we will approve Point Comfort's proposed capital structure and rate of return on equity.

c. Interruptible Services Revenue Crediting

36. Point Comfort elected to provide a 100 percent credit of interruptible revenues, net of variable costs, to its firm and interruptible services. Our policy regarding new interruptible services requires a pipeline to credit 100 percent of the interruptible revenues, net of variable costs to firm and interruptible customers or to allocate costs and volumes to these services.¹⁷ Point Comfort's provision is consistent with our policy and is approved.

d. Rate Changes and Three-Year Filing Requirement

37. If it desires to make any changes not specifically authorized by this order prior to placing its facilities into service, Point Comfort will need to file an amendment to its application under section 7(c). In that filing, Point Comfort will need to provide cost data and the required exhibits supporting any revised rates. After the facilities are constructed and placed in service, Point Comfort must make a NGA section 4 filing to change its rates to reflect any revised construction and operating costs.

38. Consistent with our precedent, we will require Point Comfort to file a cost and revenue study at the end of its first three years of actual operation to justify its existing cost-based firm and interruptible recourse rates.¹⁸ In its filing, the projected units of service should be no lower than those upon which Point Comfort's approved initial rates are based. The filing must include a cost and revenue study in the form specified in section 154.313 of the regulations to update cost of service data. After reviewing the data, we will determine whether to exercise our authority under section 5 of the NGA to establish just and reasonable rates. In the alternative, in lieu of this filing, Point Comfort may make a section 4 filing to propose alternative rates to be effective no later than three years after the in-service date for its proposed facilities.

¹⁷ See, e.g., *Independence Pipeline Co.*, 89 FERC ¶ 61,283 (1999); *Maritimes & Northeast Pipeline L.L.C.*, 80 FERC ¶ 61,136 at 61,475 (1997), *order on reh'g*, 81 FERC ¶ 61,166 at 61,725-26 (1997).

¹⁸ See, e.g., *Empire State Pipeline and Empire Pipeline, Inc.*, 116 FERC ¶ 61,074, at P 133 (2006); *Entrega Gas Pipeline Inc.*, 112 FERC ¶ 61,177, at P 52 (2005).

4. Pro Forma Tariff

39. Point Comfort proposes to offer firm and interruptible transportation services on an open-access basis under the terms and conditions set forth in its *pro forma* tariff in Exhibit P to the application. We find that Point Comfort's proposed tariff generally complies with Part 284 of the regulations, with the exceptions discussed below. We will require Point Comfort to file actual tariff sheets consistent with the directives in this order at least 30 days, but no more than 60 days, prior to the commencement of service.

a. Usage Charges

40. The usage charges in Point Comfort's FTS and ITS rate schedules (*pro forma* Sheet Nos. 22 and 32) are based on the "[q]uantity of gas scheduled to be received for the account of shippers." The usage charge should be applied to the actual quantity delivered, which may differ from the amount of gas scheduled. We will require Point Comfort to change its FTS and ITS rate schedules to indicate that the usage charge will be based on the amount of gas delivered.¹⁹

b. Rate Schedule PALS Section 6.1

41. Section 6.1 of the Rate Schedule PALS provides that Point Comfort "may require shippers to withdraw or repay all, or any portion, of the gas quantities parked or borrowed . . . within one day of [t]ransporter's [c]ritical notice to shipper." We do not believe that one day is a reasonable response time to require a shipper to remove its park balance or repay its loan balance. Thus, we will require Point Comfort to revise its tariff to provide PALS shippers with additional time to withdraw or repay PALS volumes.²⁰

c. Force Majeure

42. A discussion of force majeure events in a tariff is intended to demonstrate that a pipeline and its customers will share the economic risks of a force majeure event, generally through a crediting of reservation charges back to shippers whose service is interrupted.²¹ We have approved two approaches to reservation charge crediting.²²

¹⁹ See, e.g., Columbia Gas Transmission Corporation, Fifth Revised Sheet No. 101; Panhandle Eastern Pipe Line, L.P., Original Sheet No. 31.

²⁰ See, e.g., ANR Pipeline Co., 83 FERC ¶ 61,087 (1998); Colorado Interstate Gas Co., 83 FERC ¶ 61,273 (1998).

²¹ Tennessee Gas Pipeline Co., 80 FERC ¶ 61,070 (1997).

Under one approach, a pipeline may offer full reservation charge crediting beginning 10 days after the event. Under the other approach, a pipeline may offer partial reservation charge crediting beginning on the first day of the event.²³ Point Comfort's force majeure proposal does not provide for reservation charge crediting. Thus, we will require Point Comfort to revise its tariff to provide that it will award reservation credits to its shippers affected by force majeure situations through partial or full reservation charge credits or through some other methodology that we find reasonable.

43. Also, we will require Point Comfort to remove the mention of "planned" outages in section 8.3 (*pro forma* Sheet No. 123). A force majeure event cannot be planned. An outage due to a planned or scheduled maintenance is considered a non-force majeure event requiring the pipeline to provide full reservation charge credits to shippers affected by the outage.²⁴

d. Operational Balancing Agreements

44. Section 11.2 provides that Point Comfort is willing to negotiate and execute operational balancing agreements (OBAs) with appropriate parties that operate natural gas facilities which interconnect with Point Comfort's system. Section 11.2 also describes how the OBAs are to operate and provides criteria that define with whom Point Comfort will enter into an OBA.

45. In Order No. 587-G,²⁵ we adopted section 284.10(c)(2)(i) of the regulations, requiring interstate pipelines to enter into OBAs at all points of connection between their systems and the systems of other interstate or intrastate pipelines. We will require Point Comfort to comply with this requirement once it is in service.

²² *Tennessee Gas Pipeline Co.*, 76 FERC ¶ 61,022, at 61,089 (1996), *order on reh'g*, 80 FERC ¶ 61,070 (1997).

²³ *North Baja Pipeline, LLC*, 111 FERC ¶ 61,101 (2005).

²⁴ *Florida Gas Transmission Co.*, 107 FERC ¶ 61,074, at P 27-28 (2004) (stating that events such as planned outages "could be read as within [the pipeline's] control" and disagreeing with the pipeline's position that "non-discretionary but planned events are appropriately included in its definition of force majeure").

²⁵ *Standards For Business Practices Of Interstate Natural Gas Pipelines*, Order No. 587-G, 63 Fed. Reg. 20,072 (Apr. 23, 1998), FERC Stats & Regs ¶ 31,062 (April 16, 1998), *order on reh'g*, Order No. 587-I, 63 Fed. Reg. 53,565 (October 6, 1998), FERC Stats and Regs ¶ 31,067 (September 29, 1998).

e. **Imbalances**

46. Section 13.3 provides that the applicable cash-out index price Point Comfort will use for its cash-out mechanism will be determined prior to operations, based on its actual interconnects. In a policy statement issued in 2003, we required that the prospective use of any index in jurisdictional tariffs must meet the criteria set forth in the policy statement and reflect adequate liquidity at the referenced location to be reliable.²⁶ We will require Point Comfort to file this information in its compliance filing, along with supporting documentation, to show that its index is in compliance with the 2003 policy statement.

47. Section 13.4 states that “any imbalances not resolved by the close of business on the fifteenth day of the month following the gas month in which the imbalance was occurred will be cashed-out.” The North American Energy Standard Board (NAESB) standard 2.3.41 provides that “transportation service providers should provide the ability to post and trade imbalances until at least the close of the seventeenth business day of the month.” We will require Point Comfort to revise its cash-out mechanism to account for the shipper’s ability to trade imbalances as required by NAESB standard 2.3.41.

f. **Unauthorized Daily Overruns/Underdeliveries**

48. Sections 14.1 and 14.2 (*pro forma* Sheet No. 156) provide that on any gas day that a shipper exceeds its confirmed scheduled volume or underdelivers its confirmed scheduled volume by more than five percent, the shipper will pay 150 percent of the cost of such overrun or underdelivered gas. The cost of the gas will be the Daily Gas Index price for the higher of (a) the gas day of receipt and delivery; (b) the preceding gas day; or (3) the following gas day. Additional penalties apply if an operational flow order (OFO) is in effect.

49. Our policy is that substantial unauthorized overrun penalties are justified only in critical periods.²⁷ We will accept Point Comfort's proposed overrun penalty for situations in which the unauthorized overrun impairs reliable service. However, there may be instances where such overruns do not impair service. For these non-critical time periods, we determined that pipelines can impose some nominal penalty not to exceed twice the pipeline's interruptible rate or that the pipeline can charge substantial penalties, but must

²⁶ *Price Discovery in Natural Gas and Electric Markets*, 104 FERC ¶ 61,121 (2003).

²⁷ *See Guardian Pipeline, L.L.C.*, 101 FERC ¶ 61,271 (2002).

waive the penalty if the unauthorized overrun does not cause operational problems.²⁸ For these reasons, we will require Point Comfort to revise its tariff to comply with our policy relating to unauthorized overrun penalties.

g. Electric Power Reimbursement

50. Section 15.6 (*pro forma* Sheet No. 161) provides the mechanism through which Point Comfort will recover the “actual electric power costs associated with electrically powered compressors, if any.” Point Comfort bases its calculation on “the quantities nominated by shipper compared to total quantities nominated by all shippers during the previous month.” Since the quantities nominated may differ from the actual quantities delivered, we will require Point Comfort to modify section 15.6 to indicate that its electric power costs will be based on the amount of gas delivered, rather than quantities nominated, to develop the shipper’s electric power costs.

h. Suspension and Termination of Service

51. Section 16.6 (*pro forma* Sheet No. 164) provides that Point Comfort may suspend or terminate service 20 days after providing notice to a shipper in the event a shipper fails to pay an invoice within 10 days after the date the invoice is due and fails to provide assurances acceptable to Point Comfort and its creditor(s). We will require Point Comfort to revise this section to conform to section 154.602 of the regulations, which requires pipelines to give at least 30 days notice to the customer and the Commission before terminating a service agreement. Point Comfort must also state that it will not bill the shipper if the shipper’s service is suspended.

i. Creditworthiness

52. If a pipeline finds a shipper to be uncreditworthy, we require that the pipeline must communicate that finding in writing to the shipper within 10 days of the determination, state the reasons for its finding, and provide the shipper with recourse to challenge the finding.²⁹ A discussion of these criteria is missing from Point Comfort’s creditworthiness section. Thus, we will require Point Comfort to revise its tariff to conform to our creditworthiness policies.

²⁸ *Questar Pipeline Co.*, 98 FERC ¶ 61,159, at 61,584 (2002).

²⁹ *See Natural Gas Pipeline Co.*, 106 FERC ¶ 61,175, at P 80 (2004); *See also Tennessee Gas Pipeline Co.*, 103 FERC ¶ 61,275, at P 45 (2003).

j. OFOs

53. Section 18.2 (b)(iii) (*pro forma* Sheet No. 169) provides that “[u]nless otherwise specified in the OFO, compliance with an OFO must be achieved within four hours, or within one hour pursuant to section 18.6(b)” and that “compliance [with daily OFOs] must be achieved by no later than the end of the gas day.” Given the range of possible issues that can arise that would require the issuance of an OFO, we do not believe that it is possible or appropriate to attempt to define in the tariff standard response times for OFOs. These can be addressed in the notification of the OFO based on their severity and impact on pipeline operations. Thus, we will require Point Comfort to revise its tariff.

k. NAESB Standards

54. Point Comfort’s tariff proposal is consistent with Version 1.6 of the NAESB Standards. On May 9, 2005, we issued Order No. 587-S which, among other things, adopted Version 1.7 of the NAESB standards.³⁰ Thus, we will require Point Comfort to revise its tariff to comply with Order No. 587-S, as modified by any future NAESB requirements in effect at the time of the filing, when it files actual tariff sheets in this proceeding. The filing must include a cross-reference showing each NAESB standard number, the tariff section containing the standard, and whether Point Comfort incorporated the standard verbatim or by reference. Point Comfort should file any information it believes relevant to its compliance with the NAESB standards.

l. Numbering Errors

55. All of the sections on *pro forma* Sheets No. 117 and 118 are numbered section 5.4. It appears that these sections should be numbered 5.5, 5.6, 5.7, and 5.8. Section 14.4(e) on Sheet No.158 should be labeled section 14.3(e). Point Comfort should make these corrections.

³⁰ *Standards for Business Practices of Interstate Natural Gas Pipelines*, Order No. 587-S, FERC Statutes and Regulations ¶ 31,179 (2005) (amending the regulations to incorporate by reference the most recent version of the standards: Version 1.7 of the consensus standards promulgated December 31, 2003 by the Wholesale Gas Quadrant of the NAESB; the standards ratified by NAESB on June 25, 2004 to implement Order 2004; the standards ratified by NAESB on May 3, 2005 to implement Order 2004-A; and the standards implementing gas quality requirements ratified by NAESB on October 20, 2004).

5. Accounting

a. Book Depreciation Rate

56. For financial accounting purposes, Point Comfort proposes a straight-line depreciation rate of five percent per annum based upon a 20-year life of the facilities. Point Comfort's use of straight-line depreciation is consistent with the Commission's Uniform System of Accounts (USofA) because it is a systematic and rational depreciation method. Thus, we will approve the use of a five-percent depreciation rate for Point Comfort.

b. Allowance for Funds Used during Construction

57. An allowance for funds used during construction (AFUDC) is a component part of the cost of constructing Point Comfort's facilities. Gas Plant Instruction 3(17) prescribes a formula for determining the maximum amount of AFUDC that may be capitalized as a component of construction cost.³¹ That formula, however, uses prior-year book balances and cost rates of borrowed funds and other capital. In cases of newly-created entities, such as Point Comfort, prior-year book balances do not exist, meaning that the formula contained in Gas Plant Instruction 3(17) could produce inappropriate amounts of AFUDC. To ensure that appropriate amounts of AFUDC are capitalized in this project, we will require Point Comfort to capitalize the actual cost of borrowed and other funds for construction purposes, not to exceed the amount of debt and equity AFUDC that would be capitalized based on the overall rate of return approved herein.³²

c. Regulatory Assets

58. Point Comfort proposes a levelized cost of service over 20 years for its recourse rates. The rate levelization is achieved by varying its depreciation expense for rate purposes to recover 100 percent of its investment over 20 years. Point Comfort's depreciation rates will vary from 1.21 percent in year one to 11.47 percent in year 20.³³ Point Comfort proposes to defer the difference between its five percent straight-line book depreciation amount and its variable recourse rate depreciation amount as a regulatory asset by debiting Account 182.3, Other Regulatory Assets, and crediting Account 407.4,

³¹ 18 C.F.R. Part 201 (2006).

³² See, e.g., *Gulfstream Natural Gas System, L.L.C.*, 91 FERC ¶ 61,119 (2000); and *Buccaneer Gas Pipeline Co. L.L.C.*, 91 FERC ¶ 61,117 (2000).

³³ See Exhibit O, Page 1 of 1.

Regulatory Credits. However, consistent with the requirements of the USofA, we will require Point Comfort to extinguish or amortize the regulatory asset by crediting Account 182.3, and debiting Account 407.3, Regulatory Debits, as the amounts are recovered in recourse rates.

VI. Environmental Analysis

A. Public Review

59. On July 7, 2005, we issued a *Notice of Intent to Prepare an Environmental Impact Statement* (NOI). We sent the NOI to over 200 interested parties including federal, state, and local officials; agency representatives; conservation organizations; local libraries; newspapers; and property owners within 0.5 mile of the proposed LNG terminal and along the proposed pipeline route.

60. On July 26, 2005, we conducted a public site visit and scoping meeting in Port Lavaca. A transcript of the scoping meeting and all written comments provided at the meeting, as well as all comments provided in response to the NOI, were entered into the public record.

61. On June 30, 2006, we issued a draft Environmental Impact Statement (EIS) for the proposed projects as required by the National Environmental Policy Act of 1969 (NEPA).³⁴ A formal notice indicating the availability of the draft EIS was also published in the *Federal Register* and the document was mailed to individuals who previously received the NOI and expressed an interest in receiving NEPA documents.

62. On August 17, 2006, we held a public meeting in Port Lavaca to hear comments on the draft EIS. A transcript of the meeting and all written comments provided in response to the draft EIS were entered into the public record.

63. On August 10, 2007, we issued the final EIS for the Calhoun LNG terminal and the Point Comfort pipeline.³⁵ The final EIS addresses the issues and concerns contained in comment letters received on the draft EIS. The final EIS also addresses issues and concerns related to the Coast Guard's review of the suitability of the waterway to support LNG ship traffic. Specifically, the final EIS addresses the proposed action being reviewed by the Coast Guard, potential project and Coast Guard alternatives, and the

³⁴ 42 U.S.C. § 4321 *et seq.*

³⁵ On August 17, 2007, the United States Environmental Protection Agency (EPA) published in the *Federal Register* a formal notice indicating the availability of the final EIS.

environmental resources potentially affected along the waterway during transit to and from the proposed LNG terminal.

B. Agency Consultation

64. As required by the EAct of 2005 and section 3 of the NGA, we consulted with the United States Department of Defense (DOD) to determine if any training or activities on any military installations would be affected by the project. No comments or concerns were received from any branch of the military, or any military installation, in reply to the staff's scoping notice or in response to the draft EIS. Based on our consultations with the DOD, we conclude that there will be no effect on military installations from this project and that no concurrence from the Secretary of Defense is required.³⁶

C. The Final EIS

65. Based on a review of the information provided by Calhoun and Point Comfort; field investigations; scoping; literature research; alternatives analysis; comments from federal, state, and local agencies; and input from individual members of the public, the final EIS concluded that if Calhoun's proposed LNG terminal and Point Comfort's proposed pipeline are constructed and operated in accordance with applicable laws and regulations, proposed mitigation efforts, and in adherence to our recommendations, the construction and operation of the proposed facilities would be an environmentally acceptable action that is unlikely to result in significant adverse environmental impacts. In reaching this conclusion, the final EIS considered the following factors:

- the proposed LNG vessels and associated escort vessels will use an existing shipping corridor currently used by other deep-draft vessels;
- dredge spoil will be disposed of at existing dredge material disposal sites;
- safety features will be incorporated into the design and operation of the proposed terminal facilities and LNG vessels;
- the proposed pipeline will parallel existing utility rights-of-ways for approximately 93.2 percent of its length;
- Calhoun and Point Comfort will implement our *Upland Erosion Control Revegetation and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures) to minimize construction impacts on soils, wetlands, and waterbodies;

³⁶ See NGA section 3(f)(3).

- the proposals will have no effect on and are not likely to adversely affect any federally-listed threatened or endangered species;
- the Coast Guard's preliminary finding issued on June 19, 2006, that the waterway is suitable for LNG marine traffic, as long as the applicants comply with certain conditions, and the security provisions and operational controls that will be imposed by the local pilots and the Coast Guard to direct the movement of LNG ships will maintain the risks of a marine LNG spill, with or without ignition, at acceptable levels;
- the environmental and engineering inspection and mitigation monitoring program for the proposals will ensure compliance with all mitigation measures and conditions included in our authorization;
- the navigational controls and marine transit safety and security measures make the likelihood of a spill from LNG vessels remote; and
- all appropriate consultations with the United States Fish and Wildlife Service (FWS), National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), Texas State Historical Preservation Office, and Advisory Council on Historic Properties, if required, and any appropriate compliance actions resulting from these consultations, will be completed before construction will be allowed to start in any given area.

1. Water Resources

66. The LNG terminal's new ship turning basin and berth will be constructed by the Calhoun County Navigation District (CCND), which owns and operates land upon which the terminal will be constructed. The ship turning basin and berth will impact approximately 49 and 13.2 acres of open water, respectively. Water quality in the area will be temporarily affected by increased turbidity during dredging, but will return to pre-construction conditions following completion of dredging. The CCND is required to obtain several permits that will address dredging and dredge material management, including permits from the United States Army Corps of Engineers (COE) under section 404 of the Clean Water Act and section 10 of the Rivers and Harbor Act.

67. The Point Comfort pipeline will cross 65 surface waterbodies using open-cut, boring, and horizontal directional drilling methods. Point Comfort will minimize impacts to surface waters by implementing the best management and mitigation measures outlined in the Procedures.

68. In the event of an accidental spill of oil, gas, lubricants, or other hazardous materials during construction or operation, Calhoun and Point Comfort will follow the

measures outlined in their draft *Water Quality Management Plan* and *Spill Prevention, Containment and Countermeasures Plan*. In addition, LNG vessels using the LNG terminal will be required to have a vessel response plan that satisfies Coast Guard requirements and applicable international standards.

69. Operational impacts of the LNG terminal on surface waters will include periodic maintenance dredging of the ship terminal basin. As part of its maintenance plan, the CCND and Calhoun estimate that 184,000 cubic yards of material will be dredged from the turning basin and ship berth on an annual basis. Over a 50-year planning period for maintenance dredging, approximately 9.2 million cubic yards (mcy) of material will be dredged from these areas. The dredged materials placement areas that will be used for the project can accommodate the additional 9.2 mcy of material.

70. As with other large cargo ships, LNG vessels will take on some ballast water to maintain stability and trim as they offload their cargo, but they will not be fully loaded when departing the terminal. Over the life of the terminal, withdrawal of ballast water will constitute an intermittent minor impact to the water resources of Lavaca Bay.

71. The effects of an LNG spill, whether ignited or unignited, at the terminal site or along the transit waterways will not result in significant impacts to water resources at the terminal site or along the LNG ship transit route.

2. Wetlands and Vegetation

72. No tidal wetlands or vegetated tidal flats will be impacted at the LNG terminal site. Approximately 11 acres of intertidal wetland, including 1.6 acres of fringe and 9.4 acres of high marsh, will be permanently filled as a result of proposed dredged material placement. Construction of the pipeline will affect approximately 20.6 acres of wetlands, while operation of the pipeline will result in the permanent conversion of 0.7 acre of forested wetlands to emergent wetlands for the life of the project. During construction, Calhoun and Point Comfort will minimize impact on wetlands by implementing the measures in the Procedures.

73. The applicants prepared a *Draft Wetlands and Waters of the U.S. Mitigation Plan*, which considers three wetland mitigation options to compensate for unavoidable wetland losses. They are: (1) on-site mitigation/restoration, (2) off-site restoration, and (3) mitigation banking. Consultation between Calhoun and Point Comfort and COE, NOAA Fisheries, and other federal and state agencies regarding mitigation efforts are on-going. For this reason, we are requiring that the applicants file this plan with the Commission prior to construction of the projects.

74. Several wetlands exist along the waterways leading to the terminal. Impacts to these wetlands resulting from typical LNG ship traffic will not be significant. However, in the unlikely event that a spill of LNG were to occur along the vessel transit route, the

impacts to wetlands could be significant. Nevertheless, the likelihood of an LNG spill is remote.

75. Construction and operation of the proposals will result in the temporary loss of vegetation and the permanent conversion of some lands to industrial lands. To minimize impacts associated with the loss of vegetation, Calhoun and Point Comfort will implement our Plan to minimize erosion during and after construction and to enhance the revegetation of disturbed areas.

76. The effects of an LNG spill, whether ignited or unignited, at the terminal site or along the transit waterways would significantly impact vegetation. However, the likelihood of a spill is remote.

3. Wildlife and Aquatic Resources

77. Impacts to wildlife resulting from construction and operation of the project will include the temporary alteration and permanent loss of habitat. Impact to wildlife will occur as a result of the permanent conversion of approximately 76.5 acres of upland habitat to industrial use at the terminal site and at the above-ground pipeline facilities. This conversion to industrial use will represent a loss of wildlife habitat. Nevertheless, the impacts resulting from this loss will be minimal since the majority of the loss will be from the LNG terminal site where the existing habitat consists of unmanaged dredge material.

78. Wildlife is not expected to be significantly impacted by the project. Once construction is completed and work areas restored, wildlife can re-occupy open available habitat. Moreover, the majority of the LNG terminal site is currently unmanaged dredge material with limited usefulness as wildlife habitat.

79. Impacts to aquatic organisms, including the burial of organisms and the removal and conversion of habitat, will result primarily from proposed dredging activities. Other impacts could result from increased turbidity and noise associated with dredging and LNG vessel operations. In addition, the withdrawal of ballast water intake by LNG ships could result in loss of organisms by direct removal or entrainment. We believe, however, that these effects will be localized, short-term, and minor.

80. LNG marine traffic will cross through essential fish habitat for white shrimp, brown shrimp, red drum, and Spanish mackerel in Matagorda and Lavaca Bays. Normal ship operations will not have significant impacts on essential fish habitat.

81. The effects of an LNG spill, whether ignited or unignited, at the terminal site or along the transit waterways could significantly impact terrestrial wildlife and aquatic resources including essential fish habitat. Again, however, we believe that the likelihood of a spill is remote.

4. Threatened and Endangered Species

82. The FWS and NOAA Fisheries identified 22 federally-listed endangered or threatened species that may potentially occur in the project area. With the exception of the bald eagle and the West Indian manatee, the FWS and the NOAA Fisheries concurred with our determinations that the proposals will have no effect and is not likely to adversely affect endangered or threatened species. Based on agency consultations, the applicants prepared a bald eagle management plan that provides guidance on the protection of bald eagles and their habitat during construction. We will require that Point Comfort consult with the FWS and the Texas Parks and Wildlife Department regarding distances of primary and secondary management zones if a bald eagle nest site is identified along the pipeline construction right-of-way, and finalize its bald eagle management plan prior to construction. In addition, we will require the applicants to implement several measures to protect the West Indian manatee. Because the consultation required by section 7 of the Endangered Species Act is not yet complete, we will also require that the applicants not begin construction until all consultations with the FWS and NOAA Fisheries are completed.

83. Along the LNG transit waterway, there are several important bird breeding areas. The two largest and most consistently productive bird rookeries are at Sundown Island and Snake Island. Noise-related impacts to these bird rookery islands could occur from LNG vessel traffic. We do not believe, however, that the noise levels generated by the LNG ships, with or without tugs, will significantly change the noise levels at the two bird rookery islands, since birds in these rookeries have become accustomed to the ship traffic in the area.

84. The effects of an LNG spill, whether ignited or unignited, along the transit waterways could potentially affect the brown pelican and/or piping plover. For the pelican, any incident near Sundown Island or Snake Island during the nesting season (March to August) could have a significant impact on the breeding populations found on these islands. An incident in the bay inlet between the jetties could affect piping plover during the winter months. However, this is winter feeding habitat for the plover and not a breeding habitat for this species. The probability of an LNG release large enough and close enough to the bird colonies to result in a severe impact is low.

5. Visual Resources

85. The most prominent visual features of the LNG terminal will be two LNG storage tanks, each 133 feet above the current grade and 262 feet in diameter. Calhoun prepared photo simulations of views of the LNG storage tanks from seven observation points. While the LNG storage tanks will be visible, they will be consistent in size and height with existing industrial facilities along the shoreline and will not result in a significant visual impact.

6. Transportation and Traffic

86. Construction workers commuting to the project area are expected to add an average of approximately 834 vehicle trips per day. At the peak of construction, a maximum of 1,410 construction worker vehicle trips are expected. Existing roads will provide land access to the LNG terminal site. Access to the pipeline and associated above-ground facilities will be via existing private and public roadways. Because construction will move sequentially along the pipeline route, any transportation impacts will be temporary on any given roadway and the transportation system would be minimally impacted by construction.

87. During the 35-month construction period for the terminal, Calhoun estimates that approximately 293 barges will supply construction material and equipment to the site, resulting in an increase of approximately nine barge trips per month. In addition, one dredging barge will be at the turning basin and ship berth site during the last six months of construction. This will cause minimal water transportation impacts.

88. During operation, the LNG terminal will receive up to an estimated 120 LNG ships per year, or between two and three ships per week, through the Matagorda Ship Channel. Area boaters are accustomed to commercial ship traffic in the Channel. The issue of deep-draft ship traffic in the Channel is not a new issue to commercial shrimpers or recreational boaters that frequent Matagorda or Lavaca Bay.

89. The impacts to traffic from an ignited or unignited marine LNG release could be significant depending on where the incident occurred, the scope of the incident, and the time of year the incident occurred. Vessel traffic would be halted until the affected LNG vessel could be safely removed from the river channel. A substantial unignited LNG release and dispersion would be a short-lived event and may result in temporary closure of the port. The associated cost could be up to \$50 million and would consist primarily of the cost to transport and repair the LNG vessel. A substantial marine LNG release with ignition resulting in a pool fire may potentially result in the closure of the port for up to 14 days. Transportation infrastructure could be affected depending on the location of the incident relative to the infrastructure, the scope of the incident, and whether the LNG ignited or evaporated. Because of the implementation of safety and security measures during marine transit, however, we believe that the likelihood of a marine spill from an LNG vessel is remote.

7. Reliability and Safety

90. We evaluated the safety of the proposed LNG import terminal facility and the related LNG vessel transit through the Matagorda Ship Channel. As part of our evaluation, we performed a cryogenic design and technical review of the proposed terminal design and safety systems. We noted several areas of concern with respect to

the proposed facility. Thus, we will require several design issues to be addressed by Calhoun before initial site preparation, before construction after final design, before commissioning, or before commencement of service. Based on our analysis, we believe the LNG terminal satisfies the exclusion zone requirements in 49 C.F.R. 193.2057 and 193.2059.

91. In light of the extensive operational experience of LNG shipping, the structural design of LNG vessels, and the operational controls imposed by the Coast Guard and the local pilots, we believe that the likelihood of a cargo containment failure and subsequent LNG spill from a vessel casualty – collision, grounding, or allision – is unlikely. As a result, the risk to the public from accidental spills from LNG carriers should be considered negligible.

92. Unlike accidental causes, historic experience provides little guidance in estimating the probability of a terrorist attack on an LNG vessel or onshore storage facility. For an LNG import terminal proposal that will have a large volume of energy transported and stored near populated areas, the perceived threat of a terrorist attack is a primary concern of the local population and requires that resources be directed to mitigate possible attack paths. While the risks associated with the transportation of any hazardous cargo can never be entirely eliminated, they can be managed. Based on the Coast Guard's review of Calhoun's Waterway Suitability Assessment and consultations, the Coast Guard advised the Commission that to make the Matagorda Ship Channel suitable for the LNG marine traffic, specific risk mitigation measures will be further developed in the Coast Guard's *LNG Vessel Traffic Management Plan*.³⁷

93. As part of our marine safety analysis, we considered how vessel security requirements for LNG ships using the proposed LNG terminal might affect other ship and boat traffic in the Matagorda Ship Channel. The addition of up to approximately 120 LNG ships per year would have a minor effect on ship traffic in the Matagorda Ship Channel.

94. Frequently, local communities are concerned that they will have to bear some of the costs of ensuring the security/emergency management of the LNG facility and the LNG vessel while in transit and unloading at the dock. The specific security/emergency management costs for the proposed project are not yet available. The final costs associated with security will be determined after the specific security needs and responsibilities have been established by the Coast Guard through consultations with other federal, state, and local agencies.

³⁷ See Coast Guard's Waterway Suitability Report dated June 19, 2006.

95. Section 311 of the EPCRA of 2005 stipulates that we must require the LNG operator to develop an emergency response plan in consultation with the Coast Guard and state and local agencies before any final approval to begin construction. Thus, we will require that Calhoun develop an emergency response plan and coordinate procedures with the Coast Guard, fire departments, state and local law enforcement, and appropriate federal agencies, as well as state, county, and local emergency planning groups.

8. Cumulative Impacts

96. The majority of cumulative impacts will be temporary and minor. Consequently, the addition of these impacts to other reasonably foreseeable impacts in the region does not result in an overall permanent increase of impacts.

97. Although the proposals herein and a project by CCND to deepen and widen the Matagorda Ship Channel will result in the degradation of some wetland habitats, compensatory mitigation programs for each project will be designed to provide a net benefit to the ecosystem. As noted by many project stakeholders, the proposals herein will cumulatively benefit the local economy through job creation and wages, purchases of goods and materials, tax revenues, and by providing a new source of competitively priced natural gas.

9. Alternatives Considered

98. The final EIS addresses alternatives to the proposals before the Commission, the Coast Guard, and the COE. In general, the reasonable alternatives before the Commission and the COE are similar. The Commission and the COE can deny the projects/permits, postpone the issuance of authorizations/permits pending further study, or issue authorizations/permits for the projects as proposed or modified by location or condition. For the Coast Guard, the reasonable alternatives include issuing a negative letter of recommendation (LOR) (essentially the no action alternative), postponing issuance of an LOR, or issuing an LOR with conditions (the Coast Guard's preferred alternative). The alternative of issuing an LOR without conditions was determined not reasonable in this case and removed from consideration because it did not meet the Coast Guard's purpose and need for issuing an LOR – ensuring adequate safety and security of LNG vessel transit. Also, no reasonable alternatives for shipping routes or other variations were identified because the proposed terminal will be adjacent to existing petrochemical import facilities.

10. Coast Guard Coordination

99. Calhoun and Point Comfort submitted their Letter of Intent to the Coast Guard on March 14, 2005, which was accepted by the Coast Guard on August 15, 2005. A decision by the Coast Guard on an LOR is pending.

100. Based on the Coast Guard's review of Calhoun's Waterway Suitability Assessment and consultations, the Coast Guard advised the Commission in its Waterway Suitability Report that to make the Matagorda Ship and Point Comfort Channels suitable for the LNG marine traffic associated with Calhoun's proposals, specific risk mitigation measures would be necessary and further developed in the Coast Guard's *LNG Vessel Traffic Management Plan*.

11. Comments on the Final EIS

101. On August 31, 2007, we received a comment from Mr. David Purcell, asserting that the final EIS did not address potential shoreline reduction risks to the project. Specifically, Mr. Purcell contends that climate changes will cause a rise in sea levels and more intense hurricanes (with their attendant storm surges) that may result in material environmental consequences for the proposals herein.

102. LNG vessel traffic necessitates the location of the proposed facilities at a deepwater port. Further, because any sea level rise would be at such a slow rate, there would be time to perform facility and/or shoreline modifications before any impacts occurred. For these reasons, we believe that analyzing the impacts of shoreline reduction resulting from a rise in sea levels due to climate change, more intense hurricanes, and the effects from storm surges is not warranted. In addition, any attempt to assess specific impacts from a possible sea level rise would be speculative at this time.

D. Commission Determination

103. We have reviewed the information and analysis contained in the final EIS regarding the potential environmental impacts of the proposals herein. Based on this review, we agree with the conclusion in the final EIS that construction and operation of the proposals herein will result in limited adverse environmental impacts. In addition, the final EIS included specific recommendations that we believe will further reduce the environmental impacts resulting from construction and operation of the proposals. We will include these recommendations as conditions to the authorizations issued to Calhoun and Point Comfort in this order.

104. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. We encourage cooperation between interstate pipelines and local authorities. This does not mean, however, 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.

105. Calhoun or Point Comfort shall notify the Commission's environmental staff by telephone, e-mail, or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Calhoun or

Point Comfort. They shall file written confirmation of such notification with the Secretary of the Commission (Secretary) within 24 hours.

VII. Summary

106. For the reasons set forth herein, and subject to the conditions set forth below, we find that Calhoun's LNG import terminal is not inconsistent with the public interest under section 3. We further find, subject to the conditions below, that Point Comfort's pipeline is required by the public convenience and necessity under section 7(c). Thus, we will grant the requested authorizations to Calhoun and Point Comfort.

107. At a hearing held on September 20, 2007, the Commission, on its own motion, received and made a part of the record in these proceedings all evidence, including the application and exhibits thereto, submitted in support of the authorizations sought herein, and upon consideration of the record,

The Commission orders:

(A) In Docket No. CP05-91-000, Calhoun is authorized under section 3 of the NGA to site, construct, and operate its LNG terminal in Calhoun County, Texas, as more fully described in this order and in the application.

(B) In Docket No. CP05-380-000, a certificate of public convenience and necessity is issued to Point Comfort authorizing it to construct and operate 27.1 miles of 36-inch diameter pipeline, as more fully described in the order and in the application.

(C) In Docket No. CP05-381-000, a blanket transportation certificate is issued to Point Comfort under subpart G of Part 284.

(D) In Docket No. CP05-382-000, a blanket construction certificate is issued to Point Comfort under subpart F of Part 157.

(E) The certificate issued in Ordering Paragraph (B) above is conditioned on Point Comfort's compliance with all of the applicable regulations under the NGA, particularly the general terms and conditions set forth in Parts 154, 157, and 284, and paragraphs (a), (c), (e), and (f) of section 157.20.

(F) Point Comfort shall execute a firm service agreement equal to the level of service represented in its precedent agreement prior to commencing construction.

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

(H) Point Comfort's initial rates and proposed tariff are approved, as conditioned and modified in this order.

(I) Point Comfort shall file actual tariff sheets consistent with the modifications in this order not less than 30 days and not more than 60 days prior to commencing service.

(J) Within three years after its in-service date, Point Comfort shall make a filing to justify its existing cost-based firm and interruptible recourse rates. In its filing, the projected units of service shall be no lower than those upon which Point Comfort's approved initial rates are based. The cost and revenue study shall be in the form specified in section 154.313 of the regulations to update cost-of-service data. In the alternative, in lieu of such filing, Point Comfort may make a section 4 filing to propose alternative rates to be effective no later than three years after the in-service date for its proposed facilities.

(K) Calhoun and Point Comfort shall comply with the environmental conditions set forth in Appendix B to this order.

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

(M) The untimely motions to intervene are granted.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.
Acting Deputy Secretary.

Appendix A

BP Energy Company

Cheniere LNG, Inc.

Duke Energy Field Services, LP

ExxonMobil Gas & Power Marketing Company, a Division of ExxonMobil Corporation

Freeport LNG Development, LP

PTL Associates, Inc.

Appendix B

Environmental Conditions for the Calhoun LNG Terminal and the Point Comfort Pipeline

1. Calhoun and Point Comfort shall follow the construction procedures and mitigation measures described in their applications, supplemental filings (including responses to staff data requests), and as identified in the final EIS, unless modified by this order. Calhoun and Point Comfort must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification.**
2. For pipeline facilities, the Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the projects. This authority shall allow:
 - a. the modification of conditions of the order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impacts resulting from project construction and operation.
3. The authorized facility locations shall be as shown in the final EIS, as supplemented by filed alignment sheets, and shall include all of the staff's recommended facility locations. **As soon as they are available, and before the start of construction**, Calhoun and Point Comfort 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 the environmental conditions of the order or site-specific

clearances must be written and must reference locations designated on these alignment maps/sheets.

4. Calhoun and Point Comfort 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, and 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 **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by the Plan, 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.
5. Calhoun and Point Comfort shall employ a team of environmental inspectors. The environmental inspectors 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 below) and any other authorizing document;

- c. empowered to order correction of acts that violate the environmental conditions of this order and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
6. **At least 60 days before the start or construction**, Calhoun and Point Comfort shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how they will implement the mitigation measures required by the order. Calhoun and Point Comfort must file revisions to the plan as schedules change. The plan shall identify:
- a. how Calhoun and Point Comfort will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
 - b. the number of environmental inspectors assigned per spread, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. company personnel, including environmental inspectors and contractors, who will receive copies of the appropriate material;
 - d. the training and instructions Calhoun and Point Comfort will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - e. the company personnel (if known) and the specific portion of Calhoun and Point Comfort's organization having responsibility for compliance;
 - f. the procedures (including use of contract penalties) Calhoun and Point Comfort will follow if noncompliance occurs; and
 - g. 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 mitigation training of on-site personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.
7. **Prior to any construction**, Calhoun and Point Comfort shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors, and contractor personnel will be informed of the environmental inspector'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.
8. Calhoun and Point Comfort shall file updated status reports prepared by the environmental inspectors with the Secretary on a weekly basis **until all construction and restoration activities are complete**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. the current construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - b. a listing of all problems encountered and each instance of noncompliance observed by the environmental inspectors 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);
 - c. corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;
 - e. 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

- f. copies of any correspondence received by Calhoun and/or Point Comfort from other federal, state, or local permitting agencies concerning instances of noncompliance, and Calhoun's and/or Point Comfort's response.
9. Calhoun and Point Comfort shall develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of their projects and restoration of the right-of-way. **Prior to construction**, Calhoun and Point Comfort shall mail the complaint procedures to each landowner whose property would be crossed by their projects.
 - a. In their letter to affected landowners, Calhoun and Point Comfort shall:
 - (1) provide a local contact that the landowners shall call first with their concerns; the letter shall indicate how soon a landowner shall expect a response;
 - (2) instruct the landowners that, if they are not satisfied with the response, they shall call Calhoun and Point Comfort's Hotline; the letter shall indicate how soon to expect a response; and
 - (3) instruct the landowners that, if they are still not satisfied with the response from Calhoun and Point Comfort's Hotline, they shall contact the Commission's Enforcement Hotline at (888) 889-8030.
 - b. In addition, Calhoun and Point Comfort shall include in their weekly status report a copy of a table that contains the following information for each problem/concern:
 - (1) the date of the call;
 - (2) the identification number from the certificated alignment sheets of the affected property;
 - (3) the description of the problem/concern; and
 - (4) an explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.
10. Calhoun and Point Comfort must receive written authorization from the Director of OEP **before commencing service from the LNG terminal and other components of the projects**. Such authorization will only be granted following a

determination that rehabilitation and restoration of the right-of-way and other areas affected by the projects are proceeding satisfactorily.

11. **Within 30 days of placing the authorized facilities in service**, Calhoun and Point Comfort shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the certificate conditions Calhoun and Point Comfort have complied with or will comply with. This statement shall also identify any areas affected by the projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

12. Calhoun and Point Comfort shall not begin construction of the proposed LNG terminal or pipeline until:
 - a. the staff completes consultation with the FWS; and
 - b. Calhoun and Point Comfort have received written notification from the Director of OEP that construction and/or implementation of conservation measures may begin. If construction has not begun within one year from the date of issuance of the Commission approval of the projects, Calhoun and Point Comfort shall consult with the appropriate offices of the NOAA Fisheries and the FWS to update the species list and to verify that previous consultations and determinations of effect are still current. Documentation of these consultations, and the need for additional surveys and survey reports (if required), and the NOAA Fisheries and the FWS comments on the surveys and survey reports and their conclusions, shall be filed with the Secretary and the Captain of the Port (COTP) prior to construction.

13. Calhoun and Point Comfort shall not begin construction of any component of their projects **until** they file with the Secretary a copy of the coastal zone consistency determination issued by the Railroad Commission of Texas.

THE FOLLOWING CONDITIONS APPLY TO POINT COMFORT

14. Point Comfort shall continue its consultation with the COE, FWS, EPA, Texas Parks and Wildlife Department and the Texas General Land Office to further develop its *Wetlands and Waters of the U.S. Mitigation Plan*. **Prior to construction**, Point Comfort shall file its final plan with the Secretary.
15. Point Comfort shall revise its bald eagle management plan to be consistent with the FWS guidelines regarding primary and secondary management zones that would be used should a bald eagle nest site be identified along the Point Comfort Pipeline construction right-of-way. Point Comfort shall file the revised plan with the Secretary prior to construction.

THE FOLLOWING CONDITIONS APPLY TO CALHOUN

16. For LNG facilities, the Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall include:
 - a. stop-work authority and authority to cease operation; and
 - b. the design and implementation of any additional measures deemed necessary to assure continued compliance with the intent of the conditions of the order.
17. As part of its environmental training, to be described in its Implementation Plan for review and written approval by the Director of OEP, Calhoun shall inform all construction and operation personnel that West Indian manatees may be present in the project area, that personnel shall not feed or water a manatee if encountered, and, if encountered, the environmental inspector shall be informed immediately and the FWS contacted.
18. **Prior to accepting** ships greater than 140,000 m³ in capacity, Calhoun shall provide the necessary information to demonstrate that the transient hazard areas identified in the final EIS are applicable. Calhoun shall file this information with the Secretary for review and written approval of the Director of OEP. This information shall also be provided to the Coast Guard.
19. Calhoun shall, until commencement of service, **annually** review its waterway suitability assessment relating to LNG vessel traffic for the project; update the assessment to reflect changing conditions which may impact the suitability of the waterway for LNG marine traffic; provide the updated assessment to the cognizant Captain of the Port/Federal Maritime Security Coordinator (COTP/FMSC) for

review and validation and, if appropriate, further action by the COTP/FMSC relating to LNG vessel traffic; and provide a copy to Commission staff.

The following conditions shall apply to Calhoun's LNG terminal design and construction details. Information pertaining to these specific requirements shall be filed with the Secretary for review and approval by the Director of OEP either: prior to initial site preparation; prior to construction of the final design; prior to commissioning; or prior to commencement of service as indicated by each specific condition. Specific engineering, vulnerability, or detailed design information meeting the criteria specified in Order No. 683 (Docket No. RM06-24-000), including security information, shall be submitted as critical energy infrastructure information pursuant to 18 C.F.R. § 388.112. See *Critical Energy Infrastructure Information*, Order No. 683, 71 Fed. Reg. 58,273 (October 3, 2006), FERC Stats. & Regs. ¶ 31,228 (2006). Information pertaining to items such as: offsite emergency response; procedures for public notification and evacuation; and construction and operating reporting requirements would be subject to public disclosure. This information shall be submitted a minimum of 30 days before approval to proceed is required.

20. Complete plan drawings and a list of the hazard detection equipment shall be filed **prior to initial site preparation**. The list shall include the instrument tag number, type and location, alarm locations, and shutdown functions of the proposed hazard detection equipment. Plan drawings shall clearly show the location of all detection equipment.
21. Calhoun shall provide a technical review of its proposed facility design that:
 - a. identifies all combustion/ventilation air intake equipment and the distances to any possible hydrocarbon release (LNG, flammable refrigerants, flammable liquids and flammable gases); and
 - b. demonstrates that these areas are adequately covered by hazard detection devices and indicates how these devices would isolate or shutdown any combustion equipment whose continued operation could add to or sustain an emergency.

Calhoun shall file this review **prior to initial site preparation**.

22. Complete plan drawings and a list of the fixed and wheeled dry-chemical, fire extinguishing, and high expansion foam hazard control equipment shall be filed **prior to initial site preparation**. The list shall include the equipment tag number, type, size, equipment covered, and automatic and manual remote signals initiating

discharge of the units. Plan drawings shall clearly show the planned location of all fixed and wheeled extinguishers.

23. Facility plans showing the proposed location of, and area covered by, each monitor, hydrant, deluge system, hose, and sprinkler, as well as piping and instrumentation diagrams (P&IDs), of the fire water system shall be filed **prior to initial site preparation.**
24. A copy of the hazard design review and list of recommendations that are to be incorporated in the final facility design shall be filed **prior to initial site preparation.**
25. Drawings of the storage tank piping support structure and support of horizontal piping at grade shall be filed **prior to initial site preparation.**
26. The design pressure of the fractionation system shall be not less than the maximum shut off pressure from the low pressure LNG pumps, the same design pressure as the LNG/gas exchangers, tube side of the process vaporizers, and the LNG surge drum. The revised P&IDs and design information for the natural gas liquids fractionation system shall be submitted **prior to initial site preparation.**
27. Procedures shall be developed for offsite contractors' responsibilities, restrictions, limitations and supervision of these contractors by Calhoun's staff, **prior to initial site preparation.**
28. Calhoun shall develop an Emergency Response Plan (including evacuation) and coordinate procedures with the Coast Guard, state, county, and local emergency planning groups, fire departments, state and local law enforcement, and appropriate Federal agencies. This plan shall include at a minimum:
 - a. designated contacts with state and local emergency response agencies;
 - b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;
 - c. procedures for notifying residents and recreational users within areas of potential hazard;
 - d. evacuation routes for residents and other public use areas that are within any transient hazard areas along the route of the LNG vessel transit;

- e. locations of permanent sirens and other warning devices; and
- f. an “emergency coordinator” on each LNG vessel to activate sirens and other warning devices.

The Emergency Response Plan shall be filed with the Secretary for review and approval by the Director of OEP **prior to initial site preparation**. Calhoun shall notify the Commission’s staff of all planning meetings in advance and shall report progress on the development of its Emergency Response Plan at **three-month** intervals.

- 29. The Emergency Response Plan shall include a Cost-Sharing Plan, identifying the mechanisms for funding all project-specific security/emergency management costs that would be imposed on state and local agencies. In addition to the funding of direct transit-related security/emergency management costs, this comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. The Cost-Sharing Plan shall be filed with the Secretary for review and written approval by the Director of OEP **prior to initial site preparation**.
- 30. The **final design** shall provide LNG drain and LNG relief valve discharge piping to the LNG tank to contain LNG within the storage system as the LNG containment design philosophy and minimize the discharge of liquid and cryogenic vapor to the cold vent system.
- 31. The **final design** shall include details of the pipe supports and restraints designed to prevent damage to piping systems and equipment in the event of a storm surge anticipated for a category 4 hurricane.
- 32. The **final design** of the hazard detection equipment shall identify manufacturer and model.
- 33. The **final design** of the fixed and wheeled dry-chemical, fire extinguishing, and high expansion foam hazard control equipment shall identify manufacturer and model.
- 34. The **final design** shall specify that unloading line check valves shall be located upstream of the block valve and adjacent to the manifold isolation valves as per note 15 of the P&ID.
- 35. The **final design** shall specify that check valves be installed in the LNG drain lines around the unloading arm shutdown valves.

36. The **final design** shall specify that the unloading recycle line 4"-P-1031 shall be connected at the end of the unloading header.
37. The **final design** shall include provisions to install LNG transfer pumps at Jetty LNG sump V-603.
38. The **final design** shall include detailed drawings of the spill control system to be applied to the LNG tank roof.
39. The **final design** shall include details of the LNG tank tilt settlement and differential settlement limits between each LNG tank and piping and procedures to be implemented in the event that limits are exceeded.
40. The **final design** shall include LNG tank fill flow measurement with high flow alarm for each tank.
41. The **final design** shall include details of the boil-off gas flow and temperature measurement provided for each tank.
42. The **final design** shall include check valves in the intank LNG pump discharge piping downstream of the minimum flow recycle connection.
43. The **final design** shall include LNG recycle from the recondenser to the LNG storage tank, designed to allow the vessel to be stabilized prior to LNG pump operation and recycle to storage for low pressure LNG pumps start up and testing.
44. The **final design** shall specify that the low and high pressure LNG pump recycle lines to storage tanks P-2019 and P-2511 shall be the same pressure class as the LNG pump discharge piping, including the final block valve to the tank.
45. The **final design** shall include provisions to recycle LNG from the suction header of the low pressure LNG pumps to storage.
46. The **final design** shall specify that LNG surge drum V-241 shall be equipped with weld-end connections for piping.
47. The **final design** shall minimize the use of flanged nozzles for connection of piping to high pressure vessels containing LNG and natural gas liquids.
48. The **final design** shall specify that 4"-P-2143 be connected to the 24-inch diameter bottom outlet line to eliminate the connection to the vessel and provide drainage for the 24-inch diameter outlet and elbow.

49. The **final design** shall include provisions to recycle LNG from the suction header of the high pressure LNG pumps to storage.
50. The **final design** shall specify that relief valves in the discharge piping of the high pressure LNG pumps and send out vaporizers be designed and set for the system design pressure consistent with the maximum shutoff pressure of the LNG pumps.
51. The **final design** shall include dual low-low temperature alarm and shutdown at the discharge of the vaporizer.
52. The **final design** shall consider locating the vaporizer flow measurement device upstream of the vaporizer.
53. The **final design** shall specify that redundant pressure transmitters for high pressure alarm and shutdown shall be provided for the fractionation system and for protection of the pipeline.
54. The **final design** shall specify that all piping with service temperature at or below -20°F shall be stainless steel.
55. The **final design** shall specify that piping specifications shall state that spiral wound gaskets shall be of type CGI to include both outer and inner retaining rings.
56. The **final design** shall specify that cryogenic piping and equipment shall be designed for cool down with liquid nitrogen.
57. The **final design** shall include P&IDs and drawings of the meter station.
58. The **final design** shall include a fire protection evaluation carried out in accordance with the requirements of National Fire Protection Association 59A, chapter 9.1.2.
59. The **final design** shall include details of the shut down logic, including cause and effect matrices for alarms and shutdowns.
60. The **final design** shall include emergency shutdown of equipment and systems activated by hazard detection devices for flammable gas, fire, and cryogenic spills, when applicable.
61. The **final design** shall include details of the air gaps to be installed downstream of all 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 shutdown the appropriate systems.
62. The **final design** shall include a hazard and operability review of the completed design. A copy of the review and a list of the recommendations shall be filed with the Secretary.
 63. The P&IDs in the **final design** shall show and number all valves including drain, vent, main, and car sealed.
 64. The **final design** shall include safeguards to be installed to protect above-ground fire water piping, including post indicator valves, from inadvertent damage.
 65. The **final design** shall specify that all hazard detection equipment shall include redundancy and fault detection and fault alarm monitoring in all potentially hazardous areas and enclosures.
 66. All valves including drain, vent, main, and car sealed valves shall be tagged in the field during construction and **prior to commissioning**.
 67. The design details and procedures to record and prevent the tank fill rate from exceeding the maximum fill rate specified by the tank designer shall be filed **prior to commissioning**.
 68. Plans and a tabulated list of the proposed hand-held fire extinguishers shall be filed **prior to commissioning**. The list and drawings shall identify the equipment number, type, size, number, and location.
 69. Operation and maintenance procedures and manuals, as well as safety procedure manuals, shall be filed **prior to commissioning**.
 70. The contingency plan for failure of the LNG tank outer containment approved by the tank manufacturer shall be filed **prior to commissioning**.
 71. A copy of the criteria for horizontal and rotational movement of the inner vessel for use during and after cool down shall be filed **prior to commissioning**.
 72. The maintenance procedures to be filed **prior to commissioning** shall state that a foundation elevation survey of all LNG tanks shall be made on an annual basis.
 73. **Prior to commissioning**, Calhoun shall coordinate, as needed, with the Coast Guard to define the responsibilities of Calhoun's security staff in supplementing other security personnel and in protecting the LNG tankers and terminal.

74. The Commission's staff shall be notified of any proposed revisions to the security plan and physical security of the facility **prior to commencement of service**.
75. Progress on the construction of the LNG terminal shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, projected schedule for completion, problems encountered and remedial actions taken. Problems of significant magnitude shall be reported to the Commission **within 24 hours**.

In addition, the following conditions shall apply throughout the life of the facility:

76. The facility shall be subject to regular Commission staff technical reviews and site inspections on at least an **annual** basis or more frequently as circumstances indicate. Prior to each Commission staff technical review and site inspection, Calhoun 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 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 (including ship arrivals, quantity and composition of imported LNG, vaporization quantities, boil-off/flash gas, etc.), and plant modifications including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/shipping problems, potential hazardous conditions from off-site vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefor), relative movement of storage tank inner vessels, vapor or liquid releases, fires involving natural gas 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)" also shall be included in the semi-annual operational reports. Such information would provide the Commission staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

78. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours** and procedures for corrective action shall be specified.
79. Significant non-scheduled events, including safety-related incidents (i.e., LNG or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, major injuries) and security related incidents (i.e., attempts to enter site, suspicious activities) shall be reported to the Commission's staff. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately** without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. In all instances, notification shall be made to the Commission's staff **within 24 hours**. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable LNG-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. free flow of LNG that results in pooling;
 - 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 gas or LNG;
 - g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes gas or LNG;
 - h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes gas or LNG 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 gas or LNG 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 condition that could lead to a hazard and cause a 20 percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility;
- l. safety-related incidents to LNG vessels 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 Commission's staff would determine the need for an on-site inspection by Commission staff, the timing of an initial incident report (normally within 10 days), and follow-up reports.