

112 FERC ¶ 61,041
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;
Nora Mead Brownell, Joseph T. Kelliher,
and Suedeem G. Kelly.

Golden Pass LNG Terminal LP

Docket No. CP04-386-000

Golden Pass Pipeline LP

Docket Nos. CP04-400-000
CP04-401-000
CP04-402-000

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

(Issued July 6, 2005)

1. On July 29, 2004, Golden Pass LNG Terminal LP (Golden Pass LNG) filed in Docket No. CP04-386-000 an application seeking authorization to site, construct and operate a liquefied natural gas (LNG) receiving terminal and associated facilities to be located near the town of Sabine Pass, Texas.¹ On August 20, 2004, Golden Pass Pipeline LP (Golden Pass Pipeline), an affiliate of Golden Pass LNG, filed in Docket No. CP04-400-000 an application seeking a certificate of public convenience and necessity, pursuant to section 7(c) of the NGA and Part 157, Subpart A of the Commission's Regulations, to construct and operate approximately 120 miles of 36-inch diameter and two miles of 24-inch diameter pipeline and related facilities to transport natural gas on an open access basis from the proposed Golden Pass LNG facilities to various interstate and intrastate pipelines in Orange County, Texas, and Calcasieu Parish, Louisiana.

¹ Golden Pass LNG is a newly formed Delaware limited partnership which currently does not own any existing facilities and is not engaged in any natural gas operations. The general partner is Golden Pass LNG Terminal Management LLC, a Delaware LLC. Its limited partner is Golden Pass LNG Terminal Investments LLC, a Delaware LLC. Golden Pass Terminal Management LLC is wholly owned by ExxonMobil Market Development Inc., which is a wholly owned subsidiary of Mobil Corporation, which is in turn a wholly owned subsidiary of ExxonMobil Corporation.

2. In Docket No. CP04-401-000, Golden Pass Pipeline requests a blanket certificate under Subpart F of Part 157 of the Commission's regulations to perform routine activities in connection with the future construction, operation and maintenance of the proposed pipeline. Finally, Golden Pass Pipeline requests authorization in Docket No. CP04-402-000 to provide open access transportation on a firm and interruptible basis pursuant to subpart G of Part 284 of the Commission's Regulations.

3. Approval of these applications serves the public interest by introducing competitively priced imported LNG to diversify our nation's energy supplies. Accordingly, we will grant the requested authorizations, as discussed and conditioned below.

I. Proposals

4. Golden Pass LNG proposes to construct and operate LNG facilities on the banks of the Sabine-Neches Waterway (or Port Arthur Ship Channel) in Jefferson County, Texas, approximately 10 miles south of Port Arthur and two miles northeast of Sabine Pass, Texas. The facilities will import, store, and vaporize foreign source LNG that will be sent out of the terminal through an onsite metering station which will connect with Golden Pass Pipeline's pipeline facilities. Golden Pass Pipeline proposes to transport the imported natural gas to its proposed interconnection facilities with various interstate and intrastate pipelines in Texas and Louisiana.

A. Golden Pass LNG Proposal

5. The proposed Golden Pass LNG terminal will provide a receiving terminal facility for LNG to be imported from Qatar and elsewhere abroad. Golden Pass LNG seeks authorization for a two-phase construction project in order to meet market demands and supply availability. The first phase will provide a nominal capacity of 1.0 billion cubic feet per day (Bcf/d). Following the completion of the second phase, the terminal will have a nominal output of 2.0 Bcf/d, with a peak capacity of 2.7 Bcf/d. Golden Pass LNG requests authorization under NGA section 3 to site, construct, and operate: (1) a berthing structure and unloading facilities for LNG ships; (2) vaporization equipment; (3) LNG storage tanks with approximate working capacity of 155,000 cubic meters (m³) each; and (4) associated utilities, infrastructure and facilities required to send out natural gas from the terminal. More specifically, the LNG facilities will be comprised of:

Marine Terminal and Transfer Lines

- A dredged turning basin and two protected berths, each equipped with mooring systems and accessories for safe berthing and de-berthing of LNG ships;
- Four 16-inch manifold liquid unloading arms (at each berth) for unloading of LNG, all equipped with powered emergency release couplings;

- One 16-inch stainless steel vapor return line (at each berth) to return vapor from the LNG storage tanks to the LNG ship during ship unloading, equipped with powered emergency release couplings;
- Two 30-inch single walled stainless steel insulated transfer lines (at each berth);
- Three dedicated tugs, and facilities for their berthing near or at the terminal; and
- Various controls, safety devices, appurtenances and accessories.

LNG Storage Facilities

- Five full-containment, nine percent nickel inner tank, top-entry LNG storage tanks, each with a nominal working volume of 155,000 m³ per storage tank;
- Three fully submerged intake pumps per tank, each sized for 3,277 gallons per minute (gpm);
- The LNG storage tanks will have a double containment design consisting of an inner steel tank and an outer concrete tank, the outer concrete tank sized to contain 110% of the volume of the inner tank;
- Instrumentation and safety systems.

LNG Vaporization and Sendout Facilities

- Ten shell-and-tube Heat Transfer Fluid (HTF) heat exchangers to vaporize the LNG;
- A boil-off gas recovery system consisting of three boil-off gas compressors, one return gas blower and a direct-contact recondenser to reliquefy the boil-off from the LNG tanks and unloading systems;
- Twenty LNG booster pumps to transfer the LNG from storage tanks to vaporizers;
- Eight HTF gas-fired heaters; and
- On-site natural gas metering facilities.

Utilities, Infrastructure and Support Systems

- Distributed control system;
- Emergency shutdown systems;
- Hazard detection system;
- Security systems and facilities;
- Fire response system;
- Low-pressure natural gas vent;
- High-pressure natural gas vent (dedicated to high pressure pressure safety valves)
- Plant air, instrument air and nitrogen systems;
- Electric power transmission and control systems;
- Service water and drinking water systems;

- Separate storm water and waste water systems;
- Access roadways and service facilities;
- Administration, control and service buildings;
- Fire and emergency access roads; and
- Other facilities required to support safe, efficient and reliable operation.

6. The Golden Pass LNG Terminal site is located in an area zoned for industrial use south of the Beaumont-Port Arthur-Orange industrial complex and will consist of approximately 205 acres of a 477 acre tract of land owned by Golden Pass LNG. The remaining 272 acres will remain in their native, undisturbed state, except for an approximate 40-acre portion that will be used as an equipment laydown area during construction.

7. In October 2003, ExxonMobil Corporation and Qatar Petroleum announced an agreement to supply LNG from Qatar to the United States for an expected period of 25 years. They did not announce how much gas will be subject to the agreement. However, Qatar's North Field has proven natural gas reserves in excess of 900 trillion cubic feet (Tcf), some of which may be liquefied and then regasified and transported through the Golden Pass project facilities. Delivery of LNG to the United States is expected to commence in 2008/2009.

B. Golden Pass Pipeline Proposal

8. Golden Pass Pipeline proposes to construct two 36-inch diameter pipelines to provide firm and interruptible transportation service for up to 2.5 Bcf/d of natural gas from the Golden Pass Terminal facilities to existing intrastate and interstate pipelines. The two pipelines will extend approximately 43 and 77 miles, respectively, from the tailgate of the terminal to new metering and regulating stations at interconnections with AEP Texoma Pipeline in Orange County, Texas, and with Transcontinental Gas Pipe Line Corporation (Transco) near Starks in Calcasieu Parish, Louisiana. Up to 11 interconnections with existing pipelines are envisioned though there are no formal agreements in place concerning interconnects. Additionally, a 2-mile, 24-inch diameter lateral from the main pipeline will connect with the ExxonMobil refinery in Beaumont, Texas. The pipeline facilities will be comprised of:

- Two parallel 36-inch diameter pipelines (approximately 43 and 65 miles long) in Texas extending from the tailgate of the proposed terminal, with a mainline capacity of 1.25 Bcf/d each and a maximum allowable operating pressure (MAOP) of 1,480 pounds per square inch gauge (psig);
- Approximately 12 miles of 36-inch diameter pipeline extending from the downstream terminus of the Texas portion of the pipeline into Calcasieu Parish, Louisiana, with a mainline capacity of 1.25 Bcf/d and an MAOP of 1,480 psig;

- Approximately two miles of 24-inch diameter lateral pipeline extending from the Golden Pass Pipeline to the ExxonMobil Beaumont Refinery, with a capacity of 0.3 Bcf/d and an MAOP of 1,480 psig;
- Up to ten pressure regulation and meter stations that correspond with eleven interconnections with other intrastate and interstate pipelines;
- Mainline block valves as required by Department of Transportation regulations,² and
- Facilities associated with up to eleven interconnections to be built subject to acceptable interconnection agreements with the respective owners of downstream facilities.

9. Golden Pass Pipeline anticipates that approximately 700 acres will be required for the 50-foot and 75-foot permanent rights-of-way following construction. Construction rights-of-way will affect about 1,600 acres, with additional work areas for waterbody, highway and railroad crossings, topsoil storage, and pipe storage and equipment yards. After construction, most lands affected by construction will be restored and allowed to revert to their former use.

10. Golden Pass Pipeline conducted an open season from November 29, 2004, through January 27, 2005, for the proposed pipeline project. On February 10, 2005, Golden Pass Pipeline reported: (1) that Golden Pass Trading Company Inc. (Golden Pass Trading) was awarded 2,600,910 Dekatherms per day (Dth/d) of firm transportation capacity through the open season process, and (2) that Golden Pass Trading and Golden Pass Pipeline executed a precedent agreement for a twenty-five year firm service contract (April, 2008 through April, 2033).

11. Golden Pass Pipeline will offer firm and interruptible transportation services under a Part 284 blanket certificate (Subpart G) on a self-implementing, non-discriminatory, open-access basis, consistent with the NGA and the Commission's regulations and policies. Golden Pass Pipeline will offer firm transportation services under Rate Schedule FT, and interruptible service under Rate Schedule IT.

12. Golden Pass Pipeline estimates the total capital cost of constructing the pipeline and appurtenant facilities at approximately \$327.6 million. The cost estimates and financing are detailed in the application. The application also contains a *pro forma* tariff and calculations for initial rates for service. Golden Pass Pipeline will file to make its *pro forma* tariff effective upon the in-service date.

13. In Docket No. CP04-401-000, Golden Pass Pipeline requests a blanket certificate under Subpart F of Part 157 of the Commission's regulations which would authorize it to

² 49 CFR Part 192.

perform routine activities in connection with the construction, operation and maintenance of the proposed facilities.

II. Notice and Interventions

14. Notice of the Golden Pass LNG and Golden Pass Pipeline applications was published in the *Federal Register* on September 16, 2004 (69 Fed. Reg. 55,809). Interventions were due on or before September 30, 2004. A number of timely, unopposed interventions were filed.³ Timely, unopposed motions to intervene are automatically granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.⁴ No protests were filed.

15. Duke Energy Field Services, LP, Houston Pipeline Company LP, Kinder Morgan Tejas Pipeline, LP, Kinder Morgan Texas Pipeline, LP, Sabine Lake Area Protective Partnership, and Sempra Energy LNG filed late motions to intervene. The Commission finds that granting these late-filed motions to intervene at this stage of the proceeding will not delay, disrupt, or otherwise prejudice the proceeding, or place an additional burden on existing parties. Therefore, for good cause shown, we will grant the late-filed motions to intervene pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure.

16. Transco notes that section 20 of its General Terms and Conditions (3rd Substitute Fourth Revised Sheet No. 328) sets forth the terms and conditions governing the construction of interconnects with its pipeline system. Therefore, Transco reserves its rights under section 20 with regard to any interconnection with its system proposed by Golden Pass Pipeline. While not opposing the applications, KeySpan identifies the 25 degrees Fahrenheit hydrocarbon dewpoint limit in *pro forma* General Term and Condition 2(b) as a potential gas quality issue and reserves the right to raise gas quality and interchangeability issues at a later time in this proceeding.⁵

³ Timely motions to intervene were filed by the following parties: BP Energy Company; Cheniere LNG, Inc.; ConocoPhillips Company; LP; ExxonMobil Development Company; Freeport LNG Development, L.P.; KeySpan Delivery Companies (KeySpan); Natural Gas Pipeline Company of America; and Transco.

⁴ 18 C.F.R. § 385.214 (2004).

⁵ Original Sheet No. 111. The Commission initiated a proceeding on natural gas standards in Docket No. PL04-3-000.

III. Discussion

A. Golden Pass LNG's Proposed Terminal

17. 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 NGA section 3.⁶ The 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.⁷ 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."

18. The Commission has found it appropriate to exercise a less intrusive degree of regulation for new LNG import terminals, and does not require the applicant to offer open-access service or to maintain a tariff or rate schedules for its terminalling service.⁸ However, the Commission reserves the authority under section 3 to take any necessary and appropriate action if it receives complaints of undue discrimination or anticompetitive behavior.

19. The Commission recognizes the important role that LNG will play in meeting future demand for natural gas in the United States and has noted that the public interest is served through encouraging gas-on-gas competition by introducing new imported supplies.⁹ The record in this case shows that the Golden Pass LNG terminal will provide such additional supplies of natural gas to customers. Because the project is new, Golden

⁶ 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.*). The Secretary subsequently delegated to the Commission the authority to approve or disapprove the construction and operation of particular facilities and the site at which facilities shall be located. DOE Delegation Order No. 00-044.00, 67 *Fed. Reg.* 8,946 (2002). However, 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.

⁷ *Distrigas Corporation 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).

⁸ See *Hackberry LNG Terminal, L.L.C.*, 101 FERC ¶ 61,294 (2002), *order issuing certificates and granting reh'g*, 104 FERC ¶ 61,269 (2003) (*Hackberry*).

⁹ *Hackberry*, 101 FERC ¶ 61,294 at P 26 (2002).

Pass LNG 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 Golden Pass LNG. Therefore, we find that, subject to the conditions imposed in this order, that the Golden Pass LNG terminal is not inconsistent with the public interest.

B. Golden Pass Pipeline's Proposed Facilities

20. 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 NGA section 7.

1. The Certificate Policy Statement

21. On September 15, 1999, the Commission issued a Policy Statement providing guidance as to how proposals to construct new natural gas pipeline facilities will be evaluated.¹⁰ Specifically, the Policy Statement explains that the Commission, in deciding whether to certificate the construction of new pipeline facilities, balances 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.

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

¹⁰*Certification of New Interstate Natural Gas Pipeline Facilities (Policy Statement)*, 88 FERC ¶ 61,227 (1999); *Order Clarifying Statement of Policy*, 90 FERC ¶ 61,128 (2000); *Order Further Clarifying Statement of Policy*, 92 FERC ¶ 61,094 (2000)(*Policy Statement*).

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

23. Golden Pass Pipeline's proposal satisfies the threshold requirement that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. Golden Pass Pipeline is a new pipeline and has no existing customers. Thus, there is no potential for subsidization by existing customers.

24. Golden Pass Pipeline also meets the remaining criteria for certification of new facilities set forth in the Policy Statement. There will be no adverse effect on existing services because Golden Pass Pipeline has no current customers. The new pipeline should also benefit interconnecting pipelines by providing new sources of gas for them to transport. While Transco states that it reserves the right to apply the terms in its own tariff to possible interconnection with Golden Pass Pipeline, no existing shippers or pipelines in the area have protested the filing.

25. Comments from landowners were generally supportive of the project, with the exception of landowners on Pleasure Island, located on the same body of water within a mile of the LNG terminal, who expressed concerns about the proximity of their residences to the LNG facility and the impact of the facility on their safety and view. These concerns are addressed in the Environmental Impact Statement prepared in this proceeding, and we believe that, with the safety features incorporated into the design and operation, the LNG import terminal and LNG vessels can be expected to operate safely. We find that the environmental conditions set forth in this order ensure that there will be limited adverse environmental impacts.

26. The need for the Golden Pass Pipeline is supported by historical and projected trends in gas demand and supply. Various national and industry organizations that monitor energy consumption trends forecast growing demand for natural gas. However, traditional sources of domestically produced gas are in long-term decline. The data shows that forecasted domestic production will be unable to keep pace with demand and that the gap will only widen in the future. It is expected that imports, including LNG, will be necessary to make up the supply gap. The Golden Pass Pipeline project is being developed to provide access to new, competitively priced LNG supplies to meet this growing demand. Based on the benefits Golden Pass Pipeline 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 Policy Statement and NGA section 7, that the public convenience and necessity requires approval of Golden Pass Pipeline's proposal.

2. Rates and Tariff

a. Initial Rates

27. Golden Pass Pipeline proposes to offer cost-based firm and interruptible open access transportation services on a non-discriminatory basis under Part 284 of the Commission's regulations.¹¹ The proposed cost-based rates reflect a straight fixed variable rate design. Golden Pass Pipeline prepared an estimated cost of service for the 25-year project using an annual straight line depreciation accrual rate of 4 percent.

28. Golden Pass Pipeline anticipates that 30 percent of the capital will be furnished by the owners as equity and that 70 percent will consist of debt. It also proposes a 13 percent return on equity (ROE) and a 7.5 percent interest rate for debt based on such factors as its form of incorporation, project risks, proposed capital structure and anticipated capital market conditions.

29. The rate for FT service is derived using a \$58,232,514 annual cost of service and FT reservation determinants of 31,210,920 Dth per year. The annual FT usage determinants total 949,332,150 Dth. The proposed maximum cost-based FT reservation rate is \$1.87 per Dth. Golden Pass Pipeline states that it currently has no variable costs, so the proposed FT usage rate is \$0.00 per Dth.

30. The IT and authorized overrun service (AOS) rates are derived at 100 percent load factor of the FT rates. Golden Pass Pipeline has not identified any usage determinants associated with its proposed interruptible service. The proposed maximum IT rate is \$0.0615 per Dth. For both its firm and interruptible services, Golden Pass Pipeline estimates .30 percent retainage for fuel and loss retainage.

31. The Commission has reviewed the proposed cost of service and proposed initial rates, and generally finds them reasonable for a new pipeline entity such as Golden Pass Pipeline.

32. Consistent with Commission precedent, the Commission will require Golden Pass Pipeline 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. In its filing, the projected units of service should be no lower than those upon which Golden Pass Pipeline'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

¹¹ See Golden Pass Pipeline's FERC Gas Tariff, *Pro Forma* Original Volume No. 1 (*pro forma* tariff).

authority under NGA section 5 to establish just and reasonable rates. In the alternative, in lieu of that future filing, Golden Pass Pipeline may make an NGA section 4 filing to propose alternative rates to be effective no later than three years after the in-service date for its proposed facilities.

b. Pro Forma Tariff Issues

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

i. Interruptible Services Revenue Crediting

34. The Commission's policy regarding new interruptible services requires either a 100 percent credit of the interruptible revenues, net of variable costs, to firm and interruptible customers or an allocation of costs and volumes to these services.¹² Instead of allocating costs to interruptible services, Golden Pass Pipeline proposes to credit 90 percent of revenues from interruptible services to firm shippers. Since Golden Pass Pipeline has chosen to use a revenue crediting mechanism, the Commission will require Golden Pass Pipeline to revise its tariff to provide for a mechanism to credit 100 percent of the interruptible revenues, net of variable costs, to its firm and interruptible shippers.

ii. Credit Worthiness and Contract Termination

a) Criteria for Shipper Credit Worthiness

35. Section 32 requires a shipper to prove creditworthiness either by having a specified minimum investment grade debt rating through Moody's, S&P, or an equivalent agency¹³ (section 32.1) or by having a financial position acceptable to Golden Pass Pipeline and its lenders (section 32.2).

36. Consistent with our ruling in *Natural Gas Pipeline Company of America (Natural)*, we will require Golden Pass Pipeline to revise section 32.2 to include objective

¹² See, e.g., *Tractebel Calypso Pipeline, LLC*, 106 FERC ¶ 61,273 (2004).

¹³ The Moody's rating must be Baa3 stable outlook or better, and the S&P rating must be BBB- stable outlook or better.

criteria for determining whether a shipper's financial position is acceptable to Golden Pass Pipeline and its lenders.¹⁴ We also find that the proposed language in that section allows Golden Pass Pipeline too much discretion, does not meet the Commission's requirement that criteria for determining creditworthiness must be clear and objective, and allows for the possibility of undue discrimination. If Golden Pass Pipeline intends to find a shipper creditworthy that does not have a credit rating, it must state in its tariff what it will rely upon to determine that a shipper's financial position is acceptable.¹⁵ In *Natural*,¹⁶ we stated that it is important that the creditworthiness evaluation process be open and objective. Therefore, Golden Pass Pipeline is directed to set forth in section 32.2 the objective financial analyses and criteria that it will use to determine a shipper's creditworthiness.

b) Requirement to Provide Security

37. Under section 32.3, any time a shipper does not satisfy Golden Pass Pipeline's creditworthiness requirements, it must provide security within five business days. For a firm agreement, such security must be a Letter of Credit from a major banking institution with an investment grade rating, or a pledge of a cash deposit, in either case equal to twelve months of Reservation Charges. For an interruptible or other service agreement, the security must be in the form of an irrevocable letter of credit or other equivalent financial guarantee equal to 30 days of service at the agreed to rate, or other security acceptable to Golden Pass Pipeline. If the non-creditworthy shipper does not provide the required security, Golden Pass Pipeline may refuse to render service.

38. The Commission has previously found that requiring a shipper to provide collateral assurances within five business days is unreasonable. As we stated in *Gulf South*, A[f]ive days is not a reasonable time period to expect a shipper to obtain requisite collateral, and does not provide sufficient time for the Commission to respond to a complaint filed by a shipper who contends it was unfairly treated by the pipeline. In

¹⁴ 102 FERC ¶ 61,355 at P 69 (2003); *see also*, *Tennessee Gas Pipeline Co.*, 103 FERC ¶ 61,275 at P 41 (2003).

¹⁵ In recent orders, the Commission has approved a range of criteria for determining creditworthiness which it considers clear and objective, while allowing a service provider to exercise discretion in its determination. *See, e.g.*, *Gulf South Pipeline Co., LP (Gulf South)*, 107 FERC ¶ 61,273 at P 20 (2004); *Natural*, 106 FERC ¶ 61,175 at P 84 (2004).

¹⁶ 102 FERC ¶ 61,355 at P 69 (2003).

addition, the shipper may be faced with requests from other pipelines to provide collateral, and five days would not provide sufficient time.”¹⁷

39. Accordingly, we direct Golden Pass Pipeline to either (1) justify a period less than thirty days for non-creditworthy shippers to provide collateral assurances; or (2) consistent with prior orders, adopt the following approach, which the Commission has found to establish a reasonable balance between a service provider=s legitimate need to obtain security and the shipper’s need for adequate time to arrange for such security.¹⁸ Under this approach, when a shipper loses its creditworthiness status, the shipper must, within five business days, pay for one month of service in advance in order to continue service. This will allow the shipper to have at least thirty days to provide collateral assurances which, in any event, shall not exceed the next three months of security for service, as discussed below.

40. If the shipper fails to provide the required security within these time periods, Golden Pass Pipeline may suspend service immediately, and also provide simultaneous written notice that it will terminate service in thirty days if the shipper fails to provide security. Golden Pass Pipeline should also provide written notification to the Commission at least thirty days prior to terminating a shipper’s service, as required by section 154.602 of the Commission’s regulations.

c) Amount of Security Required of Non-Creditworthy Shippers

41. Section 32.3(a) describes options available to a shipper that must provide security to Golden Pass Pipeline if it fails to meet or maintain creditworthiness requirements. Security for firm service must consist of either (1) a letter of credit from a major banking institution with an investment grade credit rating, or (2) a cash pledge, in either case equal to 12 months of reservation charges, adjusted annually. The security for interruptible or other service must consist of “an irrevocable letter of credit or other such equivalent financial guarantees equal to 30 days of service at the agreed to rate.” Section 32.3(b) provides that the non-creditworthy shipper may alternatively “[p]rovid[e] other security acceptable to [Golden Pass Pipeline].” Finally, section 32.3 provides that Golden Pass Pipeline may refuse to render service if the non-creditworthy shipper fails to provide security.

42. The requirement that a non-creditworthy interruptible shipper must provide security equal to 30 days worth of charges is consistent with Commission policy, and

¹⁷ *Gulf South*, 103 FERC ¶ 61,129 at P. 49 (2003), *reh’g denied*, 107 FERC ¶ 61,273 at P. 20 (2004).

¹⁸ *See Tennessee*, 102 FERC ¶ 61,075 at P. 18 (2003).

therefore approved. However, requiring a non-creditworthy firm shipper to provide security equal to 12 months of reservation charges is not consistent with Commission policy. Since before Order Nos. 436 and 636, the Commission has approved a collateral requirement equal to three months of demand charges as the industry standard.¹⁹

43. Thus, in *Natural*,²⁰ the Commission determined that requiring longer than three months of security is acceptable in precedent agreements for greenfield pipelines and major system expansions, but once the pipeline goes into service, tariff requirements for security must be limited to three months. This limitation applies equally to standby irrevocable letters of credit, collateral security, a guarantee by a creditworthy entity, or prepayment costs. Golden Pass Pipeline is directed to revise section 32.3(a) accordingly.

44. The alternative requirement in section 32.3(b) of permitting a shipper to provide other security acceptable to Golden Pass Pipeline must be revised to provide that Golden Pass Pipeline will administer this option on a not unduly discriminatory basis, and that the value of the other security provided must be the same as required under section 32.3(a) for the respective service.

45. Also, as we held in *Tennessee*,²¹ shippers that opt to pledge collateral equal to three months of reservation charges under section 32.3 must have an opportunity to earn interest on such pledges either by Golden Pass Pipeline paying the interest itself at the Commission's interest rate, or by the shipper designating an interest-bearing escrow account to which Golden Pass Pipeline may have access to payments for services provided if needed.

46. With regard to Golden Pass Pipeline's right, under section 32.3, to refuse to render service if the non-creditworthy shipper fails to provide security, Golden Pass Pipeline must clarify (1) whether this refers to suspension of service or termination of service, and (2) whether Golden Pass Pipeline would consider a shipper's failure to maintain creditworthiness or financial assurances under section 32 as a default under the contract subjecting the shipper to the remedies of suspension or termination under section 36, discussed further below.²² In this regard, Golden Pass Pipeline is directed to clarify the

¹⁹ See *Gulf South*, 107 FERC ¶ 61,273 at n. 38.

²⁰ See *Natural*, 102 FERC ¶ 61,355 at P 29-30 (2003).

²¹ 103 FERC ¶ 61,275 at P 21 (2003), *reh'g denied*, 105 FERC ¶ 61,120 at P 17-24.

²² Section 36.1 states provisions for termination that are applicable "[except where different procedures for termination of a Transportation Agreement are expressly provided in the GT&C"]".

relationship between the five-day period for a shipper to provide financial assurance in section 32.3, and the ten-day and thirty-day prior notice provisions for suspension and termination in Section 36.

47. Finally, consistent with prior Commission orders,²³ Golden Pass Pipeline is directed to revise section 32 to state that it will communicate its determination on shipper creditworthiness in writing, include its reasons for any denial of creditworthiness in such communication, that the communication will be made within 10 days of its determination, and that it will provide recourse to the shipper to challenge the finding.

iii. **Default, Suspension and Termination**

48. Section 36 describes procedures for Golden Pass Pipeline to terminate a contract in two circumstances. Paragraphs (1) and (2) provide that when either party fails to perform any of the covenants or obligations under a service agreement, the non-defaulting party may issue a notice requiring the other party to cure the default within 10 days, or the agreement will terminate. Paragraph (4) provides that when a company is subject to voluntary liquidation, court-ordered winding up of its affairs, appointment of a receiver or similar type officer, or appointment of an administrator or like officer upon insolvency or likely insolvency, then either party has the right to suspend the agreement immediately and terminate the agreement by giving 30 days prior written notice to the other party.

49. Section 36.4 does not address whether a shipper whose service has been suspended will continue to be billed demand charges by Golden Pass Pipeline. In accordance with prior Commission orders,²⁴ we direct Golden Pass Pipeline to revise its tariff to state that shippers will not incur demand charges when their service is suspended. Also, as stated elsewhere in this order, a service provider cannot terminate a shipper's contract without giving the Commission at least 30-days written prior notice in addition to notifying the shipper. We direct Golden Pass Pipeline to revise section 36.4 accordingly.

iv. **NAESB Standards**

50. Golden Pass Pipeline's tariff proposal is intended to be consistent with Version 1.6 of the North American Energy Standards Board (NAESB) Standards, and the

²³ *Natural*, 106 FERC ¶ 61,175 at P 80 (2004); *Tennessee*, 103 FERC ¶ 61,275 at P 45 (2003).

²⁴ *See, e.g., Natural*, 106 FERC ¶ 61,175 at P 53.

recommendations of NAESB's Wholesale Gas Quadrant (WGQ) adopted by the Commission in Order No. 587-R.²⁵ On May 9, 2005, the Commission issued Order No. 587-S amending its regulations, which among other things, adopted Version 1.7 of the NAESB standards.²⁶ Therefore, when it files actual tariff sheets in this proceeding, Golden Pass Pipeline is directed to revise its tariff to be compliant with Order No. 654 as modified by any future NAESB requirements then in effect.

v. Scheduling Priorities

51. Section 5 provides that a shipper nominates by requesting quantities of gas to be received and delivered at specific receipt and delivery points. Section 6.1 states general scheduling principles under which firm quantities are to be scheduled first, allocated on a pro rata basis if necessary, followed by Authorized Overrun Service (AOS) quantities allocated on a pro rata basis, followed by interruptible quantities allocated by price.

52. Section 6.2 states how nominations will be scheduled at "specific Delivery Points" in the following order of declining priorities:

- (1) FT service, including [Authorized Overrun Service] AOS quantities, utilizing delivery points on a primary basis, to the extent of a shipper's primary delivery point capacity for that point, prorated on the basis of reservation quantity;
- (2) FT service, including AOS quantities, utilizing delivery points not on a primary basis but within shippers' primary paths; and shippers nominating quantities greater than their delivery point capacities, prorated on the basis of each shipper's share of the total of such nominations;
- (3) FT service, including AOS quantities, utilizing delivery points not on a primary basis and outside the shippers' primary paths, prorated on the basis of each shipper's share of the total of such nominations;

²⁵ *Standards for Business Practices of Interstate Natural Gas Pipelines*, Order No. 587-R, 68 Fed. Reg. 13,813 (Mar. 21, 2003), FERC Stats. & Regs. ¶ 31,141 (2003) (Order No. 587-R).

²⁶ *Standards For Business Practices of Interstate Natural Gas Pipelines*, Order No. 654, 111 FERC ¶ 61,203 (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 Western Gas Quadrant (WGQ) 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 the Order 2004-A; and the standards implementing gas quality requirements ratified by NAESB on October 20, 2004).

(4) IT service, “on the basis of rate paid, from the highest to the lowest, with pro rata allocation when the rate paid is equal, including the maximum Rate Schedule IT, Recourse Rates Usage Charge . . .”

53. The Commission considers authorized overrun service associated with a firm service contract to be an interruptible service in terms of scheduling.²⁷ Therefore, because Section 6.2 includes AOS quantities within the same scheduling priority assigned to nominations under associated FT contracts, the scheduling priority of AOS is contrary to Commission regulations requiring that interruptible services be scheduled at a lower priority than firm services.²⁸ Golden Pass Pipeline is directed to revise section 6.2 to schedule all AOS nominations after all firm nominations;

54. Further, in section 35, Golden Pass Pipeline has incorporated by reference NAESB Standard 4.3.23, which requires the subcategories of informational postings of capacity to be “Operationally Available” and “Unsubscribed.” However, section 6.3 states: “Available AOS, as posted on [the] Web Site from time to time, will be allocated as follows” giving the impression that Golden Pass Pipeline will consider unsubscribed capacity as initially reserved for AOS rather than IT service. Golden Pass Pipeline is directed to revise section 6.3 to be consistent with NAESB Standard 4.3.23.

55. Finally, Golden Pass Pipeline is directed to modify section 6.2 to apply the same scheduling priorities to receipt points as well as delivery points.²⁹

vi. Curtailment Priorities

56. Section 8.4 describes the curtailment priorities at delivery points as the reverse order of the scheduling priorities described in section 6.2.

57. Section 8.4 is contrary to Commission policy that once scheduled, all firm service is assigned the same priority for curtailment purposes, irrespective of whether capacity is utilized on a primary or secondary basis.³⁰ In addition, section 8.4 includes AOS quantities in the curtailment priorities assigned to firm services, contrary to Commission policy and precedent that all interruptible service is curtailed before all firm service.

²⁷ *CNG Transmission Corp.*, 81 FERC ¶ 61,346 at 62,592 (1997).

²⁸ 18 C.F.R. §§ 284.7 and 284.9.

²⁹ Order No. 637-B, 92 FERC ¶ 61,062 at 61,170 (2000).

³⁰ Order No. 637-B, 92 FERC at 62,013.

58. Section 8.2 gives Golden Pass Pipeline the unqualified right to interrupt IT transportation service at any time in order to provide service under Rate Schedule FT, “including AOS.” This proposal is not consistent with NAESB Standard 1.3.2 (iv), which prohibits bumping during the Intraday 2 Nomination Cycle. Golden Pass Pipeline is directed to revise section 8.2 accordingly.

vii. Resolution of Shipper Imbalances

59. Section 9 provides for resolution of shipper imbalances, after netting and trading, through a tiered cashout mechanism utilizing an Index Price as described in section 9.1(d). Golden Pass Pipeline indicates that it has yet to determine the spot prices that will comprise the Index Price, since such prices will depend on its actual interconnections. Therefore, Golden Pass Pipeline’s actual tariff filing should identify the spot prices that it will use to determine the Index Price. Further, Golden Pass Pipeline is directed to include in its filing an explanation of how the Index Price complies with Commission’s Policy Statement on Price Discovery in Natural Gas and Electric Markets.³¹

viii. Invoice, Payment and Termination for Non-Payment

60. Section 13.2 provides that if a Shipper fails to pay Golden Pass Pipeline’s entire invoice by its due date, and such failure continues for 30 days thereafter, then in addition to any other remedy under the service agreement, Golden Pass Pipeline “may terminate the Transportation Agreement and/or suspend further delivery of Gas without further notice.” Golden Pass Pipeline is directed to revise this section to be consistent with section 154.602 of the Commission’s regulations, which requires a natural gas company to notify the Commission of the proposed termination at least 30 days prior to its effective date. Also, this section must reflect the Commission’s requirement that the shipper be given 30-days’ written notice prior to termination.³²

61. Section 12.1, (Billing) indicates that its provisions are pursuant to NAESB Standards 3.3.15 and 3.3.16, which deal with prior period adjustments. However, these standards are not addressed in the text of section 12.1 nor incorporated by reference in section 35 of the tariff. Therefore, Golden Pass Pipeline is directed to include Standards 3.3.15 and 3.3.16 in the tariff, either verbatim in the text or by incorporating them by reference.

³¹ 109 FERC ¶ 61,184 (2004).

³² *Natural Gas Pipeline Co. of America (Natural)*, 108 FERC ¶ 61,170 (2004).

ix. Force Majeure

62. Section 1.16 (Definitions) describes various circumstances that Golden Pass Pipeline will consider to be a force majeure event. The text of this definition requires several clarifying revisions. First, in order to distinguish repairs constituting a force majeure event from planned maintenance as described in section 26, Golden Pass Pipeline is directed to add the phrase “unplanned, emergency” between the words “making” and “repairs” in the first sentence. Second, in order to clarify that the definition does not include all possible force majeure circumstances, Golden Pass Pipeline is directed to add the words “any circumstance” after the phrase “governmental body or” in the first sentence.

63. Section 19.5 provides that if a force majeure event prevents or substantially impairs a party from performing a material obligation or condition under the service agreement, either party may terminate the agreement by providing notice to the other party if service has not been completely and permanently restored after 24 consecutive months following the force majeure event, at the time notice is provided. This language should be revised, consistent with section 154.602 of the Commission’s regulations, to require Golden Pass Pipeline to provide 30-days prior notice to the Commission before terminating a service agreement. In addition, consistent with Commission precedent this section should provide for 30-days prior notice to the shipper being terminated.³³

x. Maintenance

64. Section 26.3 gives Golden Pass Pipeline the right to perform planned maintenance for a maximum of three days over a maximum of two maintenance periods in any Calendar Year. This section does not require Golden Pass Pipeline to provide reservation charge credits to shippers for reductions in service due to planned maintenance. The Commission has held that an outage due to planned or scheduled maintenance is considered a non-force majeure event that requires a pipeline to provide full reservation charge credits to affected shippers.³⁴ Therefore, Golden Pass Pipeline is directed to provide for full reservation charge credits for reductions in service due to planned maintenance in accordance with the reservation charge crediting formula set forth in section 8.1(a) of Rate Schedule FT.

³³ *Natural*, 108 FERC ¶ 61,170 (2004).

³⁴ *See, e.g., Natural*, 108 FERC ¶ 61,170, at P 7 (2004); *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 its [the pipeline’s] control” and disagreeing with the pipeline that “non-discretionary but planned events are appropriately included in its definition of force majeure”); *Alliance Pipeline, L.P.*, 84 FERC ¶ 61,239, at 62,214 (1998).

65. Section 26.4 gives Golden Pass Pipeline the right to curtail deliveries of gas “without incurring liability to the Shipper to the extent necessary to carry out Emergency Maintenance . . .” Emergency Maintenance requiring curtailment of deliveries would be considered a force majeure event as defined by section 1.16, requiring Golden Pass Pipeline to provide reservation charge credits to firm shippers under sections 8.1(a) and (c) of Rate Schedule FT. Therefore, Golden Pass Pipeline is directed to add the phrase, “except to the extent required by section 8.1 of Rate Schedule FT,” after the phrase “liability to the Shipper” in section 26.4.

xi. Negotiated Rates

66. In pertinent part, section 1.29 defines a negotiated rate as a rate or formula “which, for some portion of the contract term, one or more of the individual rate components may exceed the maximum charge, or be less than the minimum charge ...” and may be based on a rate design other than straight fixed variable.” It is not clear whether the first part of this definition is consistent with Commission precedent and policy, under which negotiated rates may remain within the maximum and minimum recourse rate thresholds during the entire term of the contract. Golden Pass Pipeline is directed to revise its definition to clarify that a negotiated rate is not precluded from remaining within the maximum and minimum recourse rates during the entire contract term.³⁵

xii. Rate Discounts

67. In Order No. 637-A, the Commission stated that the current policy permitting pipelines to limit discounts to particular points needs to be reexamined in the compliance filings, as part of the examination of restrictions on capacity release and segmentation.³⁶ In *CIG/Granite State*,³⁷ the Commission adopted a new policy that permits a shipper to retain a discount when it moves to segmented points or secondary points through a streamlined request process in which the pipeline processes a request for discounts within 2 hours. However, in its Second Order on Remand in *Williston Basin Interstate Pipeline Co.*,³⁸ the Commission vacated the policy adapted in *CIG/Granite State*.

68. Section 28.3 (Order of Discounting) sets forth a discounting proposal based on the Commission’s policy articulated in *CIG/Granite State*. In light of our order in *Williston*

³⁵ *Williams Gas Pipelines Central, Inc.*, 92 FERC ¶ 61,190 (2000).

³⁶ See Order No. 637-A, at 31,595.

³⁷ See *Colorado Interstate Gas Co.*, 95 FERC ¶ 61,321 (2001); *Granite State Gas Transmission, Inc.*, 96 FERC ¶ 61,273 (2001), *order on reh’g*, 98 FERC ¶ 61,019 (2002).

³⁸ 110 FERC ¶ 61,210 (2004).

Basin Interstate Pipeline Co.,³⁹ when Golden Pass Pipeline files its actual tariff sheets, it may choose not to include this provision in its tariff.

xiii. Miscellaneous

69. Golden Pass Pipeline is directed to make the following tariff revisions when it files actual tariff sheets:

70. In the Statement of Rates and Charges (Sheet No. 20), the ACA unit surcharge should be changed from \$0.0021 to \$0.0000. Section 154.402 of the Commission's regulations requires a company to pay its bill for annual charges before applying the ACA unit surcharge to its rates.

71. Section 35 of the tariff, which incorporates by reference NAESB Standards, should indicate the version number of the standards incorporated. Also, Golden Pass Pipeline should replace the word "Industries" in the caption of section 35 with the word "Energy".

72. The Forms of Service Agreements for firm, interruptible and replacement shippers do not appear to provide for including the actual rate or rate formula in the agreements or the Appendices thereto. Golden Pass Pipeline is directed to revise its Forms of Service Agreements to provide for a statement of the actual rate for service.

73. Except for paragraph 8.3 (Generic Discount Conditions), Golden Pass Pipeline is directed to delete section 8 (Negotiable Terms) from the firm transportation Form of Agreement since Commission policy does not allow the negotiation of terms and conditions of service.⁴⁰

74. Golden Pass Pipeline should change the section reference in the first paragraph of section 38 from "36" to "38."

75. Golden Pass Pipeline should delete the following language in section 29.3 (Service Complaints): "specifically state that it is a complaint under Order No. 497 [marketing affiliate regulations no longer effective]." This language is a reference to regulations

³⁹ See 110 FERC ¶ 61,210 (2004).

⁴⁰ *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, 74 FERC ¶ 61,076 (1996); *order granting clarification*, 74 FERC ¶ 61,194 (1996); *order denying requests for reh'g and clarification*, 75 FERC ¶ 61,024 (1996); *order denying reh'g*, 75 FERC ¶ 61,066; *appeal pending sub nom., Meridian Oil Co., et al. v. FERC*, Nos. 96-1160, *et al.*, (D.C. Cir. May 14, 1996).

superceded by procedures set forth in section 38 (Compliance Plan for Transportation Services) for shippers filing complaints with the pipeline involving transporter- affiliate transactions in accordance with section 250.16(c) of the Commission's regulations.

76. Golden Pass Pipeline should also add a statement to section 29.3 that nothing in the tariff will prejudice the rights of shippers to file a complaint under section 385.206 of the Commission's regulations.

77. Golden Pass Pipeline should change a section reference in paragraph (a) of section 8, Rate Schedule FTS, from "section 6" to "section 5".

3. Accounting

78. Golden Pass Pipeline's proposed straight-line depreciation rate of 4 percent per year based upon a 25-year life is consistent with the Commission's Uniform System of Accounts because it is a systematic and rational depreciation method. Therefore, the Commission approves the use of a 4 percent depreciation rate for Golden Pass Pipeline.

79. An allowance for funds used during construction (AFUDC) is a component part of the cost of constructing Golden Pass Pipeline'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.⁴¹ 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 Golden Pass Pipeline, prior year book balances do not exist; therefore, using the formula contained in Gas Plant Instruction 3(17) could produce inappropriate amounts of AFUDC.

80. Therefore, to ensure that appropriate amounts of AFUDC are capitalized in this project, we will require Golden Pass Pipeline to capitalize the actual cost of borrowed and other funds and 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. This is consistent with what we have required in other similar cases.⁴²

C. Environmental

81. The FERC issued a draft EIS addressing Golden Pass LNG's and Golden Pass Pipeline's proposals (collectively, Golden Pass project) on March 3, 2005. FERC issued the final EIS on June 3, 2005. The United States Environmental Protection Agency

⁴¹18 C.F.R. Part 201 (2004).

⁴² See, e.g., *Gulfstream Natural Gas System, L.L.C.*, 91 FERC ¶ 61,119 (2000); and *Buccaneer Gas Pipeline Company L.L.C.*, 91 FERC ¶ 61,117 (2000).

(EPA) prepared a *Notice of Availability of the Final Environmental Impact Statement for the Proposed Golden Pass LNG Terminal Project* dated June 10, 2005. The draft and final EIS were mailed to federal, state, and local agencies, elected officials, Native American tribes, newspapers, public libraries, interveners to the FERC proceeding, and other interested parties (i.e., landowners, other individuals, and environmental groups who provided scoping comments). The final EIS addresses the issues and concerns raised in response to the draft EIS. The final EIS also addresses: marine resources; geologic resources and hazards; soils and sediments; water resources; fishery resources, benthic communities, and wildlife; vegetation communities; endangered and threatened species; land use, recreation, and visual resources; cultural resources; socioeconomics; air quality and noise; reliability and safety; cumulative impacts; and alternatives to the proposed facilities.

82. Staff included an Essential Fish Habitat (EFH) Assessment in the draft EIS that described how the proposed Golden Pass project could affect EFH. The EFH Assessment was reviewed by the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NOAA Fisheries). NOAA Fisheries provided one conservation recommendation for the project. It recommended that a final EFH mitigation/beneficial uses plan should be fully developed by Golden Pass, and then reviewed and approved by NOAA Fisheries prior to site construction.

83. Our staff prepared a final Environmental Impact Statement (EIS) for the Golden Pass LNG Terminal and Pipeline Project.⁴³ On June 10, 2005, the Environmental Protection Agency published in the *Federal Register* a Notice of Availability of the final EIS. Approximately 250 copies of the final EIS were mailed to agencies, groups, and individuals on the mailing list.

84. The final EIS addressed purpose and need, alternatives, geology, soils and sediments, water resources, wetlands, vegetation, wildlife, essential fish habitat, land use, socioeconomics, cultural resources, air quality and noise, safety, and cumulative impacts. The United States (U.S.) Army Corps of Engineers (USACE), U.S. Department of the Interior, Fish and Wildlife Service (FWS), the U.S. Coast Guard, and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) were cooperating agencies in the preparation of the final EIS.

85. The final EIS addressed comments from 31 individuals who attended the public meetings held on March 22 and 23, 2005, and 22 comment letters filed in response to the draft EIS.⁴⁴ The commenters' primary concerns related to wetland impacts and

⁴³ We issued the final EIS on June 3, 2005.

⁴⁴ We issued the draft EIS on March 3, 2005.

mitigation for permanent wetland losses, impacts on threatened and endangered species, alternative LNG terminal sites, marine traffic, and LNG safety.

86. Based on information provided by Golden Pass and further developed by field investigations, literature research, alternative and route variation analyses, and contacts with federal, state, and local agencies and individual members of the public, the final EIS determined that construction and operation of the Golden Pass LNG Terminal and Pipeline Project would result in limited adverse environmental impact.

87. As discussed in the final EIS, about 399.0 acres of wetland would be affected by construction of the project. About 108.8 of these acres would be permanently affected by the construction and operation of the LNG terminal, and about 64.2 acres of forested wetlands would be permanently converted to herbaceous wetlands or lost by construction and operation of aboveground facilities and use of new permanent access roads along the proposed pipeline. To compensate for permanent wetland impacts, Golden Pass is working with the USACE, FWS, NOAA Fisheries, Texas Parks and Wildlife Department (TPWD), and Louisiana Department of Wildlife and Fisheries (LADWF) to finalize its Aquatic Resources Mitigation Plan. The Draft Final Aquatic Resources Mitigation Plan (May 5, 2005) was provided in appendix G of the final EIS. Further consultation with these federal and state agencies is needed to finalize the Aquatic Resources Mitigation Plan. The final version of the plan will be part of the USACE's pending section 404 permit for the project.

88. Proposed mitigation for permanent impacts to coastal emergent marsh, herbaceous wetlands, and transitional herbaceous wetlands includes restoration of about 244 acres of eroded coastal marsh within the J.D. Murphree Wildlife Management Area (WMA). This would be accomplished by the beneficial use of excavated and dredged material removed from the LNG construction site and placed in appropriate areas in the WMA that have suffered erosion.⁴⁵ As compensation for permanent impacts to bottomland hardwood wetlands, swamp, mixed pine-hardwood wetlands, pine flatwoods wetlands, and scrub shrub wetlands within the Sabine-Neches River watershed, Golden Pass would acquire and donate a minimum of 309 acres of forested wetland property adjacent to conservation preserves within this watershed.⁴⁶ To compensate for permanent wetland impacts within the Calcasieu River watershed due to pipeline construction, Golden Pass would acquire and donate about 40 acres of land in the Southwest Louisiana Pine

⁴⁵ The plan for marsh creation and restoration within the WMA was developed in consultation with the TPWD, which manages the WMA, the USACE, FWS, and NOAA Fisheries.

⁴⁶ The plan for compensation for permanent impacts to wetlands within the Sabine-Neches River watershed was developed in consultation with the TPWD, USACE, NOAA Fisheries, and FWS.

Wetland Mitigation Bank operated by The Nature Conservancy.⁴⁷ The final EIS recommended that Golden Pass file the final Aquatic Resources Mitigation Plan with the FERC, prior to construction. We concur with this recommendation.

89. The final EIS concludes that with the exception of the federally endangered red cockaded woodpecker (RCW), the project is not likely to adversely affect federally listed threatened or endangered species. However, surveys requested by the FWS for the RCW and its potential habitat have not yet been completed due to lack of landowner access. Therefore, Endangered Species Act (ESA) consultation is still ongoing until the surveys and survey reports can be completed and the FWS had had an opportunity to comment on the project's effect on the RCW and its habitat. Further, NOAA Fisheries has not provided its final comments on the impact of the project on federally listed endangered or threatened marine mammals and sea turtles. The final EIS includes a recommendation for Golden Pass to complete the field survey and survey report for the RCW. The final EIS also recommends that project construction may not begin until the FERC concludes ESA consultation with the FWS and NOAA Fisheries. We concur with this recommendation.

90. Project construction is not expected to have a significant impact on essential fish habitat (EFH). About 6.3 acres of coastal emergent wetlands along the pipeline route have been identified as EFH. No EHF was identified at the LNG terminal site. NOAA Fisheries concurs with these conclusions. NOAA Fisheries is consulting with Golden Pass and federal and state agencies in the development of the Aquatic Resources Mitigation Plan for the project. The plan will incorporate comments from NOAA Fisheries regarding pre- and post-construction surveys to ensure that wetlands which function as EFH are returned to pre-construction contours and elevations. It will also include mitigation for wetlands temporarily and permanently affected by the project. If the project is constructed and operated in compliance with the requirements of the final Aquatic Resources Mitigation Plan and the recommendations in the final EIS impacts to EFH will be minimized. Golden Pass will not begin construction until the Aquatic Resources Mitigation Plan has been finalized.

91. On June 3, 2005, we issued a Draft General Conformity Determination in the final EIS since the project will be constructed within a non-attainment zone for ozone. A local notice requesting comments on this document was issued on June 12, 2005. The 30 day comment period for filing comments on this document ends July 12, 2005. In its May 5, 2005 comments on the draft EIS, the Texas Commission on Environmental Quality (TCEQ) stated that the project is in conformity with the State Implementation Plan for the Beaumont/Port Arthur area and the TCEQ has issued an air permit for the project. The

⁴⁷ The plan for compensation within the Calcasieu River watershed was developed in consultation with the LADWF, the USACE, NOAA Fisheries, and FWS.

project will use advanced air emission control technology (ultra low-NOx burners and Selective Catalytic Reduction) and operational limitations to limit emissions. The Final General Conformity Determination will be issued after the close of the comment period and will address comments that may be filed in response to the notice as well as the comments of the TCEQ and EPA. Golden Pass will not begin construction until the Final General Conformity Determination has been issued and it receives written authorization from the Director of the Office of Energy Projects to begin construction.

92. The final EIS evaluated potential congestion impacts from additional LNG ship traffic. The operation of LNG vessels should have a similar impact as other large vessels currently using the Sabine Neches Waterway (SNWW) and should cause no more disruption than the vessel traffic increases planned by other SNWW users. The final EIS recommended several mitigation measures to address ship travel including submitting a waterway suitability assessment to the Captain of the Port/Federal Maritime Security Coordinator with annual updates. In accordance with 33 CFR 127.000, Golden Pass submitted a Letter of Intent to the Coast Guard on October 29, 2004, conveying its intention to build an LNG terminal at the proposed site and to transport by ship LNG to the terminal. Upon completion of its review, the Coast Guard would issue a Letter of Recommendation to address the suitability of the SNWW for the proposed LNG transport. That action is pending.

93. The final EIS included an analysis of public safety issues associated with the Golden Pass LNG Terminal and Pipeline Project. The analysis identified the principal properties affected and hazards associated with LNG, presented a summary of the design and technical review of the cryogenic aspects of the LNG terminal, discussed the types of storage and retention systems, analyzed the thermal radiation and flammable vapor cloud hazards resulting from credible land-based LNG spills, analyzed the safety aspects of LNG transportation by ship, and reviewed issues related to security and terrorism. Requirements for safety of the terminal are in the Coast Guard regulations in 33 CFR Part 127 and for maintaining security are in 33 CFR Part 105 and will be approved by the Captain of the Port.⁴⁸ The cryogenic analysis resulted in Environmental Conditions 46 through 93. These conditions require Golden Pass LNG to make certain modifications to its facility design prior to construction.

94. The final EIS discussed alternatives, including no action or postponed action; system alternatives; offshore LNG terminals; alternative onshore LNG plant sites; pipeline route alternatives; and route variations. The alternatives analysis in the final EIS found no reasonable alternatives that would be environmentally preferable to the proposed site.

⁴⁸ See section 4.13.6 of the final EIS.

95. We have reviewed the information and analysis contained in the final EIS regarding the potential environmental effect of the project. Based on our consideration of this information, we agree with the conclusions presented in the final EIS and find that Golden Pass' project is environmentally acceptable, if the project is constructed and operated in accordance with the recommended environmental mitigation measures in the appendix to this order. Thus, we are including the environmental mitigation measures recommended in the final EIS as conditions to the authorizations issued to Golden Pass in this order. Further, we are ensuring that the LNG facilities will be subject to Commission staff technical review and site inspections on at least an annual basis.

96. The Coast Guard cooperated in the preparation of the EIS and plays an important role with regard to maritime issues. With regard to vessel transit to and from the Golden Pass LNG receiving facility, the Coast Guard has identified no constraints. Further, at this time no outstanding safety and security issues have been identified.

97. The Coast Guard issued, on June 14, 2005, a *Navigation and Vessel Inspection Circular – Guidance on Assessing the Suitability of a Waterway for Liquefied Natural Gas (LNG) Marine Traffic* (NVIC). The purpose of this NVIC is to provide Coast Guard Captains of the Port (COTP)/Federal Maritime Security Coordinators (FMSC), members of the LNG industry, and port stakeholders with guidance on assessing the suitability and security of a waterway for LNG marine traffic. It provides specific guidance on the timing and scope of the waterway suitability assessment (WSA), which will address both safety and security of the port, the facility, and the vessels transporting the LNG. Preparation of this guidance was referenced in the Coast Guard's March 18, 2005 Report to Congress on Liquefied Natural Gas Terminals.

98. The WSA process addresses the transportation of LNG from an LNG tanker's entrance into U.S. territorial waters, through its transit to and from the LNG receiving facility, and includes operations at the vessel/facility interface. In addition, the WSA addresses the navigational safety issues and port security issues introduced by the proposed LNG operations. The Coast Guard's report on the WSA identifies the relevant safety and security issues from the broad viewpoint of impact on the entire port, as well as provides a detailed review of specific points of concern along the LNG tanker's proposed transit route. The WSA will be reviewed on an annual basis and updated as needed until the facility is placed in service.

99. To facilitate implementation of the guidelines presented in the NVIC, FERC staff will continue working with the COTP Port Arthur and determine how the guidance should be followed by Golden Pass project sponsors.

100. A review of port security issues, as identified in the NVIC, will be completed by the Coast Guard. Therefore, we require that:

Golden Pass LNG shall submit a draft waterway suitability assessment to the cognizant Captain of the Port/Federal Maritime Security Coordinator for review and validation and provide a copy to the FERC staff.

101. Once the draft WSA is submitted, the Coast Guard NVIC process will be implemented by the cognizant Captain of the Port, as appropriate, and the Coast Guard will submit a WSA report to FERC. The findings of this report will be reviewed by the Director of OEP and implemented by Golden Pass. To ensure that these measures are funded, we require that:

Golden Pass provide a comprehensive 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 should include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. This plan should be filed with the Secretary prior to initial site preparation for review and approval by the Director of OEP.

102. We also recognize that the initial assessment would be prepared well before import operations would commence, and that the port's overall operation/security picture may change over that time period. New port activities may commence, infrastructure may be added, or population density may change. Improvements in technology to detect, deter and defend against intentional acts may also develop. Therefore, we also require that:

Golden Pass shall annually review its waterway suitability assessment for the project; update the assessment to reflect changing conditions; provide the updated assessment to the cognizant Captain of the Port/Federal Maritime Security Coordinator for review and validation; and provide a copy to the FERC staff.

103. The Commission has reviewed the information and analysis contained in the final EIS regarding the potential environmental effect of the project. Based on our consideration of this information, we agree with the conclusions presented in the final EIS and find that the Golden Pass project is environmentally acceptable, if the project is constructed and operated in accordance with the conditions discussed above and the EIS's other recommended environmental mitigation measures in the Appendix to this order. Thus, we are including the environmental mitigation measures recommended in the final EIS as conditions to the authorizations granted by this order for the Golden Pass project.

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.⁴⁹

105. Golden Pass LNG and/or Golden Pass Pipeline shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Golden Pass LNG and/or Golden Pass Pipeline. They shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

The Commission Orders:

(A) In Docket No. CP04-386-000, Golden Pass LNG is hereby authorized under section 3 of the NGA to site, construct and operate its LNG terminal in Jefferson County, Texas, as more fully described in this order and in the application.

(B) In Docket No. CP04-400-000, a certificate of public convenience and necessity is issued to Golden Pass Pipeline under section 7(c) of the NGA authorizing it to construct and operate the 1.8 mile-long, 24-inch diameter Beaumont Lateral, a 77 mile-long segment of mainline, and a 43 mile-long pipeline loop, as more fully described in this order and in the application.

(C) The authorizations in the above paragraphs are conditioned on Golden Pass LNG and/or Golden Pass Pipeline, as applicable:

- (1) placing the proposed facilities in service within 60 months or 5 years of the final order;
- (2) complying with all regulations under the NGA including, but not limited to, Parts 154 and 284, and paragraphs(a), (c), (e), and (f) of section 157.20 of the Commission's regulations;
- (3) making a tariff filing no sooner than 60 days but no later than 30 days prior to commencement of service to place the rates approved herein into effect,

⁴⁹See, e.g., *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Commission*, 894 F.2d 571 (2d Cir. 1990); and *Iroquois Gas Transmission System, L.P.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

including redlined tariff sheets reflecting how its actual tariff filing differs from its *pro forma* filing;

- (4) signing and returning the Testimony of Acceptance of all the provisions, conditions, and requirements of the Presidential Permit to the Secretary of the Commission within thirty days of the issuance of this order;
 - (5) complying with the safety and security measures identified in the Coast Guard's Waterway Suitability Assessment report; and,
 - (6) complying with the specific environmental conditions listed in the Appendix of this order.
- (D) Golden Pass Pipeline must execute firm contracts equal to the level of service and in accordance with the terms of service represented in its precedent agreement prior to commencement of construction.
- (E) In Docket No. CP04-402-000, a blanket transportation certificate is issued to Golden Pass Pipeline under Subpart G of Part 284 of the Commission's regulations.
- (F) In Docket No. CP04-401-000, a blanket construction certificate is issued to Golden Pass Pipeline under Subpart F of Part 157 of the Commission's regulations
- (G) Within three years after its in-service date, as discussed herein, Golden Pass Pipeline must make a filing to justify its existing cost-based firm and interruptible recourse rates. In its filing, the projected units of service should be no lower than those upon which Golden Pass Pipeline's approved initial rates are based. The cost and revenue study must be in the form specified in section 154.313 of the regulations to update cost-of-service data. In the alternative, in lieu of this filing, Golden Pass Pipeline may make an NGA section 4 filing to propose alternative rates to be effective no later than 3 years after the in-service date for its proposed facilities.
- (H) Golden Pass LNG and Golden Pass Pipeline shall notify the Commission's environmental staff by telephone or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency

notifies either Golden Pass LNG or Golden Pass Pipeline. Golden Pass LNG or Golden Pass Pipeline shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission.

(S E A L)

Linda Mitry,
Deputy Secretary.

Appendix

Environmental Conditions

The authorizations granted in this order are subject to the following environmental conditions:

1. Golden Pass LNG Terminal LP and Golden Pass Pipeline LP⁵⁰ shall follow the construction procedures and mitigation measures described in its application, supplemental filings (including responses to staff data requests) and as identified in the EIS, unless modified by this Order. Golden Pass 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 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 Golden Pass LNG Terminal and Pipeline Project (Project). This authority shall include:
 - a. the modification of conditions to the Commission's Order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. For liquefied natural gas 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:

⁵⁰ Hereafter, Golden Pass is used in measures applicable to both Golden Pass LNG Terminal LP and Golden Pass Pipeline LP.

- 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 this Order.

4. **Prior to any construction**, Golden Pass 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.

5. The authorized facility locations shall be as shown in the 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**, Golden Pass 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 this Order. All requests for modifications of environmental conditions of this Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

6. Golden Pass 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.

7. Golden Pass shall file **At least 60 days before that start of construction**, Golden Pass shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Golden Pass will implement the mitigation measures required by this Order. Golden Pass must file revisions to the plan as schedules change. The plan shall identify:

- a. how Golden Pass will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
- 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 Golden Pass 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 specific portion of Golden Pass' organization having responsibility for compliance;
- f. the procedures (including use of contract penalties) Golden Pass 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 onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.

8. Golden Pass 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 the Project and restoration of the right-of-way. **Prior to construction**, Golden Pass shall mail the complaint resolution procedures to each landowner whose property would be crossed by the project and to those landowners whose property is within ½ mile of the LNG terminal site.

- a. In its letter to affected landowners, Golden Pass shall:
 - (1) provide a local contact that the landowners should call first with their concerns; the letter should indicate how soon a landowner should expect a response;

- (2) instruct the landowners that, if they are not satisfied with the response, they should call Golden Pass' Hotline; the letter should indicate how soon to expect a response; and
 - (3) instruct the landowners that, if they are still not satisfied with the response from Golden Pass' Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030.
 - b. In addition, Golden Pass shall include in its 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.
9. Golden Pass 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 this Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of this Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of this Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
10. Golden Pass shall file updated status reports prepared by the environmental inspector 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 inspector(s) during the reporting period (both

- for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
- 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 this Order, and the measures taken to satisfy their concerns; and
 - f. copies of any correspondence received by Golden Pass from other federal, state or local permitting agencies concerning instances of noncompliance, and Golden Pass' response.
11. Golden Pass must receive written authorization from the Director of OEP **before commencing service of the Project**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the Project are proceeding satisfactorily.
12. **Within 30 days of placing the certificated facilities in service**, Golden Pass 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 Golden Pass has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
13. Golden Pass shall file the following information on nonjurisdictional facilities:
- a. a map showing the final location of all nonjurisdictional facilities, including the Entergy powerlines, and associated pipeline laterals identified on table 1.5-2 of this EIS;
 - b. documentation of consultations with the appropriate agencies and the status of federal, state, or local permits or approvals required for their construction; and
 - c. status, and copies of agency clearances (or copies of any surveys and reports prepared) for wetlands, threatened and endangered species, and cultural resources.

Golden Pass shall defer obtaining service from or providing service to any nonjurisdictional facility until this information has been filed with the Secretary.

14. Golden Pass Pipeline shall develop a draft monitoring program for the third party compliance monitor that includes:

- a. the employment by a third-party contractor of at least one full-time monitor per construction spread;
- b. the employment by a third-party contractor of a part-time compliance manager to direct and coordinate with the monitors; manage the daily and weekly reporting system, and variance requests; and provide technical support to the FERC staff;
- c. a systematic approach for the review and approval by the compliance manager and monitors of variances for certain construction activities as may be required by Golden Pass Pipeline based on site-specific conditions.
- d. maintenance of files for the daily and/or weekly inspection reports submitted by the both third-party monitors and Golden Pass Pipeline's EIs; and
- e. a discussion of how this monitoring program can incorporate and/or be coordinated with monitoring or reporting that may be required by other federal and state agencies.

This draft monitoring program and proposals from potential contractors to provide monitoring services shall be filed with the Secretary for review and approval by the Director of OEP **prior to construction of the pipeline system.**

15. Golden Pass Pipeline shall reduce the construction right-of-way by 20 feet in areas where topsoil is segregated from only the ditch and spoil side of the right-of-way. The revised construction plans and alignment sheets should be filed with the Secretary **before construction of the pipeline system.**

16. **Before construction of the pipeline system,** Golden Pass Pipeline shall contact each landowner affected by the pipeline and each operator of public supply wells in the vicinity of the pipeline to identify any drinking water supply wells or springs within 150 feet of the construction right-of-way or within a wellhead protection zone. The results of these consultations shall be filed with the Secretary in a report that summarizes these consultations and that provides a table listing each drinking water supply well, the distance (in feet) and direction from the nearest pipeline MP, and any specific requested mitigation measures.

17. **Before construction of the LNG terminal,** Golden Pass LNG shall file with the Secretary its finalized dredge material placement plan.

18. **Before construction of the pipeline system,** Golden Pass Pipeline shall file with the Secretary the site-specific waterbody crossing plans submitted and approved by the COE.

19. In addition to implementing the measures of our Procedures, Golden Pass Pipeline shall develop a site-specific crossing plan for Big Hill Bayou (MP 11.9) which includes the crossing technique it will use in the adjacent wetlands and all areas that will be disturbed by construction, as well as the location and types of erosion and sedimentation control measures that will be used to minimize turbidity and sedimentation into Big Hill Bayou and adjacent wetlands. The Big Hill Bayou site-specific crossing plan shall be filed with the Secretary for review and approval of the Director of OEP **prior to construction of the pipeline system.**

20. Golden Pass Pipeline shall provide with its site-specific major waterbody crossing plans the following information:

- a. the location and types of erosion and sedimentation control measures that would be used to minimize turbidity and sedimentation into nearby waterbodies and adjacent wetlands; and
- b. the results of geotechnical investigations conducted for each HDD.

The site-specific plans shall be filed with the Secretary for review and written approval of the Director of OEP **prior to construction of the pipeline system.**

21. Golden Pass Pipeline shall file with the Secretary a site-specific crossing plan for each waterbody if the planned directional drill cannot be completed. Each site-specific plan shall address how Golden Pass Pipeline would seal the abandoned drill hole and shall include scaled drawings identifying all areas that would be disturbed by construction. Golden Pass Pipeline shall file each plan concurrent with its application to the COE for a permit to construct using this plan and the COE permit when it is obtained. The Director of OEP must review and approve this plan in writing **before construction of the crossing.**

22. Golden Pass Pipeline shall implement the measures contained in its *Frac-Out Prevention, Monitoring and Response Procedure for Horizontal Directional Drilling for the Sabine Island WMA* on all HDDs.

23. **Before construction of the pipeline system,** and as part of the site-specific major waterbody crossing plan for Keith and Shell Lakes, Golden Pass Pipeline shall file the following information:

- a. comments from (or permits issued by) the COE and TXPWD for the HDDs (MPs 1.18 to 1.98, 7.35 to 8.3, and 8.3 to 9.44);
- b. a description of how excess spoil at the exit/entry pits in the lakes would be disposed of; and
- c. revised alignment sheets showing the final dimensions of each (Mainline and Loop) of the HDD exit and entry pits.

24. **Before construction of the pipeline system**, Golden Pass Pipeline shall file with the Secretary comments from (or permits issued by) the COE and TXPWD for the flotation canal near MP 8.6, as well as the final construction plan.

25. Golden Pass Pipeline shall file with the Secretary written confirmation from appropriate federal, state, and/or local permitting agencies that Taylor and Hillebrandt Bayous, and the Gallier Canal may be used for hydrostatic test water withdrawal and/or discharge, **before construction of the pipeline system**.

26. Golden Pass Pipeline shall file a site-specific plan for contractor/pipe yards Nos. 3, 5 and 8 that identifies the type of equipment, materials, and fuels/lubricants that would be stored in the yard, and the location of erosion controls/fencing and travel ways within the yard. If the contractor/pipe yard will be used to store fuels/lubricants or for parking of vehicles or construction equipment, the site-specific plan shall include procedures that would be implemented to avoid or minimize impacts on wetlands or waterbodies from spills or leaks. If wetlands or waterbodies are found during field delineations of contractor/pipe yards Nos. 1 and 2, a similar site-specific plan shall be prepared for each yard where wetland/water areas are found. These site-specific plans shall be filed with the Secretary for review and approval by the Director of OEP **before use of the contractor/pipe yard**.

27. Golden Pass shall file a request for approval to modify existing roads or install new access roads that would cross wetlands either temporarily or permanently. This request shall include installation of culverts as necessary to maintain wetland hydrology and COE verification of the wetlands affected and be filed for review and approval by the Director of OEP **before use of the access road**.

28. Golden Pass shall reduce the construction right-of-way in wetlands so that:

- a. A maximum construction right-of-way width of 110 feet would be used for the Mainline and Loop (MPs 0.0 and 42.8), unless otherwise approved in the final EIS (MPs 0.0 to 1.1, MPs 9.6 to 11.7, MPs 11.7 to 14.1, and MPs 14.7 to 17.2); and
- b. A maximum construction right-of-way width of 75 feet would be used for the Mainline (MPs 42.8 to 77.8) and the Beaumont Lateral (MPs 0.0 to 1.8).

These changes shall be reflected in revised alignment sheets that Golden Pass files with the Secretary for review and written approval by the Director of OEP **prior to construction of the pipeline system**.

29. **Prior to construction of any facilities**, Golden Pass shall file with the Secretary a copy of the Section 404/10 permit issued by the COE, and the finalized Aquatic Resources Mitigation Plan developed in consultation with the COE, NOAA Fisheries, FWS, TXPWD, and LADWF.

30. Golden Pass LNG shall monitor bird strikes at the LNG facility, and powerlines from SH 87, during the spring and fall migrations from the start of construction activities through the end of the year following commencement of service. Protocol for the monitoring shall be developed in consultation with the FWS and TXPWD. Within 30 days of completion of the monitoring, Golden Pass LNG shall file a report with the Secretary documenting the results of the monitoring and recommending any additional mitigation measures.

31. Golden Pass shall develop in consultation with appropriate federal and state resource agencies an aquatic restoration plan that describes the methods to be employed to ensure that final grade in wetlands is restored to preconstruction conditions. The submerged aquatic restoration plan shall be filed with the Secretary **prior to construction of the pipeline system**.

32. Golden Pass **may not** begin construction activities **until**:

- a. the FERC completes any necessary consultations with the FWS and NOAA Fisheries; and
- b. Golden Pass receives written notification from the Director of OEP that construction and/or implementation of conservation measures may begin.

33. If construction of the LNG terminal or pipeline system has not begun within 1 year from the date of FERC approval of the Project, Golden Pass shall consult with the appropriate offices of the FWS and NOAA Fisheries to update the species list and to verify that previous consultations and determinations of effect are still current. Documentation of these consultations, and additional surveys and survey reports (if required), and FWS or NOAA Fisheries comments on the survey and its conclusions, shall be filed with the Secretary **prior to construction**.

34. Golden Pass Pipeline shall continue negotiations with Entergy regarding use of at least 10 feet of the existing powerline easement between MPs 0.79 and 1.65 for temporary construction workspace for the Beaumont Lateral. The results of this consultation and a revised alignment sheet showing the construction right-of-way overlap of the existing powerline easement shall be filed with the Secretary **before construction of the pipeline system**.

35. **Before construction of the pipeline system**, Golden Pass Pipeline shall file with the Secretary site-specific crossing plans for each of the specialty agricultural areas listed

in table 4.1.8-6 of the EIS. Golden Pass Pipeline shall provide copies of the plans to the affected landowners or operators and file with the Secretary any comments on the plans from these parties.

36. Golden Pass Pipeline shall develop a HDD noise mitigation plan to minimize noise impacts to the residential area located between about MPs 50.4 and 51.8 in Orange County, Texas. This plan should detail the measures proposed to reduce noise levels to about 55 dBA at the nearest noise sensitive area, or provide other means to minimize impacts to residents. The plan shall also include documented consultation with the affected landowners. This plan shall be filed with the Secretary, for review and written approval by the Director of OEP, **prior to the start of construction of the pipeline system.**

37. Golden Pass Pipeline shall develop site-specific residential construction plans for the residences located at MP 63.1 and 63.2 that identify and include all proposed construction mitigation measures that would be utilized to minimize temporary construction impacts. These plans shall also include documented consultation with individual landowners and shall be filed with the Secretary, for review and written approval by the Director of OEP, **prior to the start of construction of the pipeline system.**

38. Golden Pass Pipeline shall consult with TXPWD to determine construction timing across the J.D. Murphree WMA to minimize impacts on recreational hunting seasons between September and February. The results of this consultation shall be filed with the Secretary **prior to construction of the pipeline system.**

39. Golden Pass Pipeline shall **not initiate** any ground disturbing activities associated with conventional construction techniques for installation of the Mainline (clearing, grading, or trenching) between MPs 61.2 (Old SH 87) and 66.3 and MPs 67.5 and 72.0 (No. Seven Road) **until** successful completion of the HDD crossing of the Sabine Island WMA between MPs 66.3 and 67.5. Golden Pass Pipeline must file written documentation demonstrating the successful completion of the **HDD prior to requesting authorization** to commence additional construction activities between MPs 61.2 and 72.0.

40. Golden Pass shall file documentation of concurrence from the Railroad Commission of Texas that the Project is consistent with the Texas CMP with the Secretary **prior to construction.**

41. In its initial Implementation Plan for the Project, Golden Pass LNG shall provide a Traffic Management Plan that identifies specific mitigation measures that would be implemented over the first 6 months of construction to minimize impacts associated with the movement of construction workers and materials to and from the LNG terminal site.

This Traffic Management Plan should be updated every 6 months or less as needed to address changing construction traffic volumes at the LNG terminal site or unrelated construction work on SH 87. Golden Pass LNG should include documentation of consultation with the TXDOT as appropriate to support its proposed Traffic Management Plan.

42. Golden Pass shall **defer** implementation of any treatment plans/measures (including archaeological data recovery); construction; and use of all staging, storage, and temporary work areas and new or to-be-improved access roads for the pipeline system **until**:

- a. Golden Pass files with the Secretary cultural resource survey reports and any required treatment plans and the SHPO's comments; and
- b. The Director of OEP reviews all cultural resource survey reports and plans and notifies Golden Pass in writing that treatment plans/measures may be implemented or that construction may proceed.

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

43. Golden Pass LNG shall **not begin** construction of the LNG terminal **until** the Commission has issued its final General Conformity Determination and Golden Pass LNG has received written approval by the Director of OEP of its filing stating that it would comply with all requirements of the General Conformity Determination.

44. Golden Pass shall **limit** construction activities to daytime hours to the extent possible and practical.

45. Golden Pass LNG shall develop a noise mitigation plan associated with pile driving activities. This plan shall include an evaluation of potential mitigation measures including the use of vibratory hammers, augered piles, and the use of a noise sleeve installed over the pile column to reduce pile driving noise levels. The plan shall identify which mitigation measures would be used, the proposed hours and days of the week that pile driving activities would occur, and what standards would be used to determine when the use of noise mitigation is required. Golden Pass shall file the plan with the Secretary for the review and written approval of the Director of OEP, **prior to the initiation of any construction activities at the LNG terminal.**

46. Golden Pass LNG shall file a noise survey with the Secretary **no later than 60 days after placing the LNG terminal into service.** If the noise attributable to the operation of the LNG terminal exceeds an Ldn of 55 dBA at any nearby NSA, Golden Pass LNG should file a report on what changes are needed and should install additional

noise controls to meet that level within 1 year of the in-service date. Golden Pass LNG should confirm compliance with this requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.

The following measures shall apply to the LNG terminal design and construction details. Information pertaining to these specific recommendations (recommendations 46 through 93) 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 final design; prior to commissioning; or prior to commencement of service as indicated by each specific recommendation. This information shall be submitted a minimum of 30 days before approval to proceed is required.

47. An evaluation of the relief and flare systems shall be made and filed **prior to initial site preparation.**

48. A complete plan and list of the proposed hazard detection equipment shall be filed **prior to initial site preparation**. The information shall include a list with 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. The final design shall identify manufacturer and model.

49. Golden Pass LNG shall provide a technical review of its facility design that:

- a. Identifies all combustion/ventilation air intake equipment and the distance(s) 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 indicate how these devices will isolate or shutdown any combustion equipment whose continued operation could add to or sustain an emergency. Fired heaters shall be shut down in the event of an LNG spill, or presence of a flammable vapor cloud.

Golden Pass LNG shall file this review **prior to initial site preparation.**

50. A complete plan and list of the proposed fixed and wheeled dry-chemical, fire extinguishing, high expansion foam, hazard control equipment shall be filed **prior to initial site construction**. The information shall include a list with 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.

51. 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; and piping and instrumentation diagrams, of the proposed fire water system shall be filed **prior to initial site preparation**.

52. The process area sump shall be relocated from within the process area and the design filed **prior to initial site preparation**.

53. The design of the containment systems and the application of insulated concrete shall be evaluated and filed **prior to initial site preparation**.

54. The **final design** of the hazard detection equipment shall identify manufacturer and model.

55. The **final design** of the hazard detection equipment shall include redundancy and fault detection and fault alarm monitoring in all potentially hazardous areas and enclosures.

56. The **final design** should include provisions for all flammable gas and UV/IR hazard detectors to be equipped with local instrument status indication as an additional safety feature.

57. In the event that open path detectors are used in the **final design**, they shall be calibrated to detect the presence of flammable gas and alarm at the lowest reliable set point, in addition to the required 25 percent lower flammability limit set point.

58. The **final design** of the fixed and wheeled dry-chemical, fire extinguishing, high expansion foam hazard control equipment shall identify manufacturer and model.

59. The **final design** shall include equipment and instrumentation for the measurement of translational and rotational movement of the inner vessel for use during and after cool down.

60. The **final design** shall include details of the BOG flow measurement system provided for each tank.

61. The **final design** shall include a reliable measurement system to monitor deflections during the hydraulic test. At a minimum, this system shall include two slope indicator ducts which bisect the tank in mutually perpendicular directions, monitoring points at the terminals of these ducts, and other monitoring points along the perimeter of the concrete shell, so that sag, warping, tilt, and settlements can be monitored. Tolerances for sag, tilt, and shell warping shall meet or exceed the limits specified by the tank manufacturer.

62. 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.
63. The **final design** shall include drawings and specifications of the spill protection system to be applied to the LNG tank roofs.
64. The **final design** shall include a discretionary vent for each tank, to be operated through the DCS.
65. The **final design** shall include provisions to ensure that all pumps can be operated within the recommended flow range when pumping from two or more LNG tanks with different levels.
66. The **final design** shall include provisions to ensure that hot glycol/water circulation is in operation at all times when LNG is present in the LNG booster pump discharge piping or when the temperature in the LNG inlet channel to any vaporizer is below 0 °F.
67. The **final design** shall include detection instrumentation and shut down procedures for vaporizer tube leak, shell side overpressure, or busting disc failure.
68. The **final design** shall include temperature measurement of the vaporizer common discharge header which should alarm the low temperature condition.
69. The **final design** shall include redundant low temperature alarm and shutdown in each vaporizer discharge.
70. The **final design** shall include provisions to recover boil-off gas, under all conditions, in the event that the send out vaporization system is not in operation.
71. The **final design** shall include automatic shutdown valves at the suction and discharge of the each boil-off blower and each boil-off compressor.
72. The **final design** shall provide revised calculations for vapor dispersion from the vent stack for cold temperature and static wind conditions.
73. The **final design** shall re-evaluate the need for heating the vent gas and the location of the vent stack.
74. The **final design** shall ensure that air gaps are 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 should vent to a safe location and be equipped

with a leak detection device that: would continuously monitor for the presence of a flammable fluid; would alarm the hazardous condition; and would shutdown the appropriate systems.

75. The **final design** shall include a fire protection evaluation carried out in accordance with the requirements of NFPA 59A, chapter 9.1.2.
76. The **final design** shall include details of the shut down logic.
77. 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.
78. Security personnel requirements for prior to and during LNG vessel unloading shall be filed with the Secretary **prior to commissioning**.
79. Operation and Maintenance procedures and manuals, as well as emergency plans, emergency evacuation plan and safety procedure manuals, shall be filed with the Secretary **prior to commissioning**.
80. Copies of the Coast Guard security plan, vessel operation plan, and emergency response plan shall be provided to the FERC staff **prior to commissioning**.
81. The contingency plan for failure of the outer LNG tank containment shall be filed **prior to commissioning**.
82. 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**.
83. The FERC staff shall be notified of any proposed revisions to the security plan and physical security of the facility **prior to commencement of service**.
84. Progress on the proposed construction project shall be reported in **monthly reports** filed with the Secretary. Details shall include a summary of activities, problems encountered, and remedial actions taken. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.
85. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least an **annual** basis or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, Golden Pass LNG shall respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed piping and instrumentation diagrams reflecting facility modifications

and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted annual report, shall be submitted.

86. **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.), plant modifications including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/shipping problems, potential hazardous conditions from offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, vapor or liquid releases, fires involving natural gas and/or from other sources, negative pressure (vacuum) within a storage tank and higher than predicted boiloff rates. Adverse weather conditions and the effect on the facility also should 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 will provide the FERC staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

87. 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 should be specified.

88. Significant non-scheduled events, including safety-related incidents (i.e., LNG or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (i.e., attempts to enter site, suspicious activities) shall be reported to FERC staff **within 24 hours**. 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. 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 for five minutes or more 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 MAOP (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 safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operating pressure or shutdown of operation of a pipeline or an LNG facility that contains or processes gas or LNG;
- 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, FERC staff will determine the need for a separate follow-up report or follow-up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident.

89. Golden Pass LNG shall coordinate, as needed, with the Coast Guard to define the responsibilities of Golden Pass LNG's security staff in supplementing other security personnel and in protecting the LNG tankers and terminal.

90. Golden Pass LNG shall develop emergency evacuation routes/methods in conjunction with the local emergency planning groups and town officials for Sabine, Sabine Pass, Pleasure Island and other public use areas that are within any transient hazard areas. These evacuation routes/methods shall be filed with the Commission for review and written approval by the Director of OEP **prior to construction.**

91. Golden Pass LNG shall develop an Emergency Response Plan (including evacuation) and coordinate procedures with 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 of Sabine Pass, Pleasure Island and other public use areas that are within any transient hazard areas;
- 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 written approval by the Director of OEP **prior to commencement of service**. Golden Pass LNG shall notify FERC staff of all meetings in advance and shall report progress on its Emergency Response Plan at 6-month intervals starting at the commencement of construction.

92. Golden Pass LNG shall submit a waterway suitability assessment to the cognizant Captain of the Port/Federal Maritime Security Coordinator for review and validation and provide a copy to the FERC staff.

93. Golden Pass LNG shall annually review its water suitability assessment for the project; update the assessment to reflect changing conditions; provide the updated assessment to the cognizant Captain of the Port/Federal Maritime Security Coordinator for review and validation; and provide a copy to the FERC staff.