

101 FERC ¶ 61, 300  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
William L. Massey, and Nora Mead Brownell.

CMS Trunkline LNG Company, LLC

Docket Nos. CP02-60-000  
and CP02-60-001

ORDER DENYING REHEARING AND GRANTING AUTHORIZATION  
UNDER SECTION 3 OF THE NATURAL GAS ACT

(Issued December 18, 2002)

1. On August 27, 2002, we issued a preliminary determination<sup>1</sup> addressing the non-environmental issues raised by the application filed by CMS Trunkline LNG Company, LLC (Trunkline LNG) requesting authorization under the Natural Gas Act (NGA) to construct and operate expansion facilities at its liquefied natural gas (LNG) terminal in Calcasieu Parish, Louisiana.<sup>2</sup> Final authorization for the construction of Trunkline LNG's proposed facilities was reserved pending completion of the environmental review. On September 24, 2002, the Lake Charles Harbor and Terminal District (District) filed a request for rehearing of the August 27 preliminary determination.

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<sup>1</sup>100 FERC ¶ 61,217 (2002).

<sup>2</sup>Trunkline LNG filed its application under sections 3 and 7 of the NGA. Since Trunkline LNG's proposal is limited to the expansion of its existing LNG import facilities, we find no need to consider Trunkline LNG's request for authorization pursuant to NGA section 7. See Southern LNG Inc., 101 FERC ¶ 61,187 (2002). Given that our section 3 import authority permits us to apply terms and conditions governing rates, practices, accounting, facilities, and financing as necessary and appropriate to ensure that the proposed expansion meets the public interest, authorization pursuant to section 7 is unnecessary. See *Distrigas Corporation v. FPC*, 495 F.2d 1057 at p. 1063-64 (D.C. Cir. 1974), 419 U.S. 834 (1974); and *Dynergy LNG Production Terminal, L.P.* 97 FERC ¶ 61,231 (2001).

2. We have now completed our environmental analysis of Trunkline LNG's proposed facilities and, for the reasons set forth below, we will grant the requisite authority under section 3 of the Natural Gas Act (NGA) for the proposed expansion of its LNG import facilities. However, we are imposing conditions as discussed herein in response to the District's request for rehearing, which is otherwise denied.

## **I. BACKGROUND**

3. The Trunkline LNG terminal is located on the north side of a turning basin at the end of the Industrial Canal that branches off of the Calcasieu Ship Channel (Channel). The entrance to the Channel begins in the Gulf of Mexico 32.2 miles offshore of southwestern Louisiana. The inland portion of the Channel is 36 miles long measured through mileposts (MP) 0 through 36. Tankers bound for the Trunkline LNG terminal exit the main portion of the Channel at MP 23 and travel another two miles along the Industrial Canal to the terminal berth in the turning basin.

4. In order to increase the storage capacity and sendout capability at the terminal, Trunkline LNG proposes, among other things: to build a fourth cryogenic storage tank with an 880,000 barrel capacity; to construct and operate additional LNG pumps and three vaporizers to increase the sustainable daily sendout capacity to 1,200 MMcf per day and peaking capacity to 1,300 MMcf per day; to construct two 2.2 Megawatt generators; and to construct and operate a second marine unloading dock. No new right-of-way is required for the expansion since all of the construction would take place within the 125-acres of the existing terminal site.

5. During Trunkline LNG's open season, BG LNG Services (BG LNG) submitted the winning bid for all the expansion capacity. BG LNG has entered into two contracts with Trunkline LNG that entitle BG LNG to all the expansion capacity as well as the terminal's current uncommitted vaporization and storage capacity and all the capacity currently committed to Duke Energy LNG under a contract set to expire in August 2005.

6. Construction of the expansion facilities will enable Trunkline LNG to unload two LNG tankers simultaneously so that approximately 175 ships can be unloaded annually. This amounts to 115 more tankers than the 60 that were unloaded in 2001. Trunkline LNG submitted a ship traffic study (Lanier Study)<sup>3</sup> with its application to show that the increase ship traffic generated by the expansion project could be accommodated by the

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<sup>3</sup>The Trunkline Study was prepared by Lanier & Associates. Resource Report 11 at Exhibit F-1, Vol. II of Trunkline's application.

Channel without adversely impacting other ship traffic. The Lanier Study estimates that current infrastructure could accommodate approximately 200 more LNG vessels a year but that additional harbor tugs would be needed to handle ship traffic above that level.

7. In the August 27 order setting forth our preliminary determination, we denied the protest and request for evidentiary hearing by the District, a political subdivision of the State of Louisiana which owns and leases out property along the Channel.<sup>4</sup> The District argued that the Commission should, as a part of its preliminary review process, address its concerns that the increased LNG ship traffic generated by the expansion project would cause economic harm to other Channel landowners and businesses.

## II. REQUEST FOR REHEARING

8. On rehearing, the District asserts that the Commission erred in failing to fully consider and address the District's concerns before the Commission issued its August 27 order setting forth its preliminary determination that approval of Trunkline LNG's proposal is in the public interest. The District states that its arguments should have been considered by the Commission along with the other factors it considered and balanced in the August 27 order. The District contends that even though there is no new right of way involved in this application, the issues it has raised are worthy of consideration at that same stage of the proceeding that the Commission would consider the interests of landowners whose property may be taken for a pipeline project. The District states that significant financial and other adverse impacts on the surrounding community are likely to occur even when a pipeline project will not require new right of way or involve the exercise of eminent domain.

9. The District asserts that review under the National Environmental Policy Act (NEPA) does not concern itself with weighing the financial impacts of a proposal. The District also states that the NEPA review process does not appear to entitle it to an evidentiary proceeding. Thus, the District argues it was denied due process by the August 27 order's deferral of the District's concerns to the environmental review.<sup>5</sup>

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<sup>4</sup>The District includes the Port of Lake Charles, which is located on the Channel north of the Industrial Canal on which Trunkline LNG's facilities are located.

<sup>5</sup>Citing Sea-Land Service, Inc. v. United States, 683 F.2d 491, 495-96 (D.C. Cir. 1982).

### **Commission Determination**

10. As explained in our August 27 order, although the District has legitimate concerns regarding the impacts of the Trunkline LNG project on Channel ship traffic, its concerns are not the same as the interests of "landowners and communities" whose property will be taken by eminent domain for a pipeline project.<sup>6</sup> In any event, however, the District's ability to present and support its arguments has not been compromised by the fact that its concerns are being addressed as part of the environmental review in this proceeding, rather than in the August 27 order setting forth our preliminary determination based on the factors addressed in that order.

11. Whenever the Commission issues an order setting forth its *preliminary* determination on a proposed pipeline project before the environmental review has been completed, final certificate authorization is withheld until the environmental review has been completed. As part of the environmental review, the Commission's consideration of adverse economic impacts is expanded to assess and balance any economic impacts that were not taken into account in reaching the preliminary determination.<sup>7</sup> Thus, as part of the environmental review, the Commission also considers any potential economic or other adverse impacts on the community and area surrounding a proposed construction project. When potential impacts on the community are identified, the Commission takes them into account and balances them against the project's expected benefits before making a final determination whether to authorize the proposed project or impose additional conditions on the project. In this case, we have considered the District's arguments and, in response to its concerns, we are imposing conditions on Trunkline LNG's authorization, as discussed below.

12. There is no new pipeline route involved in this application which only concerns the expansion of Trunkline LNG's existing import facilities within its existing terminal property. Nevertheless, we recognize that increased ship traffic on the waterway leading

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<sup>6</sup>88 FERC ¶ 61,227 at p. 61,748.

<sup>7</sup>E.g., Cove Point LNG Limited Partnership, 97 FERC ¶ 61,043 at pp. 61,210-11 (2001)(certificate order, issued after preliminary determination order, discussing environmental findings relating to socioeconomic impacts of reactivation of gas import facilities on commercial and recreational fishing in the area around Cove Point marine terminal); Questar Southern Trails Pipeline Company, 92 FERC ¶ 61,110 at p. 61,416 (2000)(certificate order, issued after preliminary determination order, discussing environmental findings relating to pipeline project's socioeconomic impacts on, inter alia, local population and property taxes).

to the Trunkline LNG facility is a likely consequence of our granting the requested authorization. However, the District has not been denied an adequate forum or due process by our August 27 order's deferral of its arguments regarding the traffic congestion to the environmental review stage of the project. The District's concerns have been fully considered and are addressed in this order based on the findings of our NEPA review process which provides a timely forum for considering a pipeline project's potential adverse impacts on landowners who may suffer economic loss even though their land is not being taken for the pipeline project.<sup>8</sup>

13. Our decision on whether to grant the District's request for an evidentiary hearing is not affected by the stage of the proceeding in which its issues are considered and addressed. Our denial of an evidentiary hearing is based on our finding that the written record provides all the evidence necessary to make a reasoned decision without a formal hearing. When the District protested this application, it insisted that an evidentiary hearing was needed largely because it had not had sufficient time to prepare its own ship traffic study to rebut the Lanier Study supplied by Trunkline LNG.<sup>9</sup> That problem has been cured since the District now relies on a study (Simulation Study)<sup>10</sup> jointly sponsored by Conoco Inc. (Conoco) and CITGO Petroleum Corporation (CITGO) and submitted with their comments on the EA. The Commission finds that the existing record, which includes both of these traffic studies as well as the various pleadings and data responses, supplies sufficient record evidence upon which the Commission may make reasoned findings regarding the disputed ship traffic congestion issues.

14. As discussed more fully below, the environmental analysis of this project identifies seven distinct factors that cause ship traffic delays in the Channel. Of these, only two are attributable to increased LNG vessels. The Commission is imposing conditions to assure that, prior to the commencement of construction at the Trunkline LNG terminal, mitigation measures are in place that will assure that LNG vessels will operate on par with any other large vessels using the Channel. In addition, these measures may also ameliorate current Channel delays to the benefit of all Channel ship

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<sup>8</sup>Gulf South Pipeline Co., LP, 94 FERC ¶ 61,292 at pp. 62,050-53 (2001)(Commission balances landowner claims of economic and environmental harm from leaving abandoned pipeline in the ground against the benefits of removing it in its environmental review of abandonment application).

<sup>9</sup>The District's March 13, 2002 reply comments at pp. 9, 13.

<sup>10</sup>The Simulation Study, dated August 28, 2002, was prepared by Discover Profits and Cash Flow.

traffic. We believe that by imposing these mitigation measures we have addressed the District's concerns regarding the possible economic consequences of this expansion project. Accordingly, the District's request for rehearing of the August 27 order is denied.

### **III. ENVIRONMENT**

15. On February 13, 2002, we issued a Notice of Intent to Prepare an Environmental Assessment for the Proposed Trunkline LNG Expansion Project, Request for Comments on Environmental Issues, and Notice of Public Meeting (NOI). We received comments in response to our NOI and at our March 6, 2002 public scoping meeting. Our staff addressed all substantive comments in the environmental assessment (EA).

16. Our staff prepared an EA for Trunkline LNG's proposal. The EA addresses geology, soils, water resources, wetlands, fisheries, dredging, vegetation, wildlife, federally listed threatened and endangered species, land use, socioeconomics, air quality, noise quality, cultural resources, reliability and safety, and alternatives.

17. On August 1, 2002, we issued a Notice of Availability of the Environmental Assessment for the Proposed Trunkline LNG Expansion Project. The EA was mailed to Federal, state, and local government agencies; local libraries and newspapers; nearby residents and industry; and non-government organizations. We received written comments on the EA from, Trunkline LNG, the District, CITGO, Conoco, Lake Charles Pilots, Inc (Lake Charles Pilots), and the Board of Commissioners of the Lake Charles Harbor & Terminal District and the National Marine Fisheries Service (NMFS).

18. The various comments to the EA are discussed below. Comments related to marine traffic issues are discussed separately in the next section of this order.

#### **Comments**

19. The NMFS comments that the EA adequately described resources of concern, as well as the potential impacts of project implementation.

20. Trunkline LNG provides clarification of and comments on the EA, as well as updates since the EA was issued. Pages 3-6 of the EA stated that "No chemicals would be added to the hydrostatic test water before or after testing." Trunkline LNG plans to re-analyze water from the Industrial Canal just prior to hydrostatic testing of the new LNG storage tank and depending on the composition of water at the time, the water may require some type of treatment. However, Trunkline LNG states that regardless of

whether the water is treated, the water discharged will comply with all applicable Federal and state rules and regulations.

21. Trunkline LNG provides updates on the status certain permits/clearances since the EA was issued. In a September 27, 2002 letter, the Louisiana Department of Environmental Quality (LDEQ) stated that the requirements for Water Quality Certification have been met and that it has no objection to the project. Also, in a October 1, 2002 letter, the LDEQ issued Trunkline LNG its air quality construction permit. However, the letter states that "Construction of the project is not allowed until such time as the corresponding Part 70 operating permit or construction authorization is approved." On November 12, 2002, Trunkline LNG received its dredging permit from the U.S. Army Corps of Engineers. This permit authorizes Trunkline LNG to dredge and maintain the mooring area adjacent to the existing facility, install mooring structures, and deposit dredged material in an existing pond, as identified in the EA.

22. On August 15, 2002, the Louisiana State Historic Preservation Officer concurred that disposal of dredge material within Trunkline LNG's previously used Dredge Material Containment Area located near the terminal, would have "no effect on historic properties." Therefore, recommendation 10 of the EA is no longer required.

23. In addition to the clarifications and updates, Trunkline LNG requests that recommendations 14, 18, and 19 of the EA be deleted and/or revised.

24. *EA Recommendation 14* - Trunkline LNG shall provide the new 880,000-barrel LNG storage tank with a separate discretionary vent independent of the existing LNG storage tanks. Trunkline LNG shall ensure that the new LNG storage tank can be isolated from the common vapor header and the existing storage tanks if necessary.

25. Trunkline LNG's three existing 600,000 barrel LNG storage tanks integrate the vapor spaces among the three existing tanks to reduce the need to vent when an upset condition in one of the existing tanks exists. When there is high pressure in any given tank it equalizes with the pressure in the other tanks automatically through a common header that is non-isolatable (except for maintenance purposes). Trunkline LNG would like to add the new fourth tank vapor space to the existing vapor spaces of the three existing tanks.

26. EA recommendation 14 was not intended to modify the normal existing procedures for operating the storage tanks. Trunkline LNG can and should integrate the vapor space of the new tank with that of the three existing tanks. However, because the new tank is considerably larger (and thus the potential for greater vapor volumes), the new tank should have the ability to isolate itself and have its own discretionary vent if a

venting event greater than anticipated occurs. Therefore, EA recommendation 14 stands (condition 14 of the Appendix to the Order).

27. *EA Recommendation 18* - Trunkline LNG shall examine the possibility of using mooring tension meters to provide constant monitoring of the ship's placement with respect to the dock and to provide faster notification of a change in condition.

28. Trunkline LNG has since considered the possibility of using mooring tension meters and has presented good reasons why they would be unnecessary for their particular facility. Therefore, this recommendation will not be included in this order.

29. *EA Recommendation 19* - Trunkline LNG shall ensure that all hazard detectors are installed with redundancy in all potentially hazardous areas and/or enclosures.

30. Trunkline LNG argues that 100 percent redundancy is not always the best design method and that National Fire Protection (NFPA) Standard 59A does not mandate 100 percent redundancy.

31. We do not agree with Trunkline LNG that 100 percent redundancy is not the best design for potentially hazardous areas and/or enclosures. We find that redundant detection of possible hazardous events is good engineering practice. In addition, NFPA Standard 59A applies only to fire hazards whereas this condition applies to all potential hazards. Therefore, EA recommendation 19 stands as condition 18 of the Appendix to this order.

32. The District comments that the EA "fails to conform to the statutory requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4332(2)(c) *et. seq.*" The District claims that the EA's discussion of the alternatives for the project is inadequate. The District states that "In sum, the [Commission] Staff presumes that the project as proposed is necessary and excludes consideration of any other feasible alternatives. The stated purpose and need of the project is to satisfy an increase in domestic demand for LNG. However, the [EA] fails to consider any other alternatives - such as allowing a lesser increase in LNG traffic, for example - that may satisfy that purported demand." Section 4 of the EA discusses the alternative courses of action available to the Commission: 1) deny the requested construction authorization; 2) postpone action pending further study; and 3) grant the authorization with or without conditions (EA page 4-1). Since the construction of facilities would occur within previously disturbed areas at the existing terminal, a review of alternative sites would not reduce environmental impacts associated with the proposal.

33. On August 27, 2002 the Commission issued a Preliminary Determination on Non-Environmental Issues in which the Commission made a preliminary determination that Trunkline LNG's proposed expansion is in the public interest because it will allow the introduction of additional and diverse gas supplies to serve growing U.S. market demand.

34. Section 1502.14 of the Council on Environmental Quality's (CEQ) NEPA regulations requires examination of all reasonable alternatives to the proposal. The CEQ has stated that reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and that use common sense. The emphasis here is "reasonable." An alternative that considers less new LNG traffic would still require additional processing equipment, an additional LNG storage tank, as well as an additional ship berth and the associated dredging. In addition, restricting the proposed level of LNG traffic is not a reasonable alternative since it would not satisfy the service requested by the shipper, BG LNG, based on its assessment of market demand. Therefore, this alternative is not reasonable and would not result in less environmental impact.

### **Marine Traffic Issues**

35. Comments on the EA concerning marine traffic issues were filed by the District, Conoco, CITGO, the Board of Commissioners of the Lake Charles Harbor & Terminal District, and Trunkline LNG. The principle issue raised by Conoco, CITGO, and the District is that the additional LNG vessels will cause congestion in the Channel that will result in significant adverse financial effects. Conoco estimated that the Trunkline LNG Expansion Project would cost \$1.54 - \$1.68 million annually in combined demurrage and increased shipping costs; while CITGO commented that the increased demurrage costs could approach \$20 million per year. Trunkline LNG, BG LNG, and the Lake Charles Pilots, Inc. filed responses to the comments of the District, CITGO and Conoco.

36. **1. Channel Capacity** - Large vessel traffic has averaged 1,000 inbound vessels annually over the past four years, with a peak of 1,091 vessels in 1998. Twelve individual port facilities account for 98 percent of the vessel traffic, and several of these ports have planned or potential increases in annual vessel traffic: CITGO (195), Conoco (58), the District (56); Trunkline LNG (115); and a new LNG facility at Hackberry (210) (EA pages 3-44 to 3-45).

37. The Lanier Study of ship traffic on the Channel prepared for Trunkline LNG evaluated the impact of projected growth in ship traffic on Channel capacity. The study determined that the resulting growth in traffic would be within the capacity of the

Channel, although tugboat availability presents the greatest restriction to growth. For example, with the four tugs presently servicing the Channel, capacity is limited to 1,414 to 1,545 vessels annually, depending on the level of LNG traffic; with an upper limit of 2,315 vessels (EA page 3-46 to 3-47). As such, the cumulative impact of the planned or potential growth in vessel traffic is, according to the Lanier Study, within the capacity of the Channel.

38. The District, CITGO and Conoco argue that the Lanier Study fails to fully address the operational realities of the Channel, and claim that staff unquestioningly accepted the "flawed" study. While criticizing the Lanier Study's treatment of Channel capacity and congestion issues, neither the District, CITGO nor Conoco question the capacity of the Channel to accommodate their combined planned increase of 309 vessels. However; these parties nevertheless object to the 115 vessel increase in LNG traffic as causing Channel congestion and subsequent economic harm. With respect to the 210 LNG vessels associated with the Hackberry LNG Project, the District recently resolved its concerns as a result of an agreement with Hackberry LNG to pay wharfage fees.<sup>11</sup>

39. The real issue is whether the additional LNG traffic proposed in this project will cause disruption or additional delays to other Channel users while still operating within the capacity limits of the Channel (EA page 3-53). In this regard, the EA examined Channel disruption and delay issues independent of the Lanier Study by evaluating the primary parameters of LNG vessel operations that could affect other channel users: tug availability; pilot availability; moving safety zone; daylight only transit; and weather and tides (EA pages 3-53 to 3-57). Information was developed through a series of data requests, discussions with the U.S. Coast Guard, and a tour through parts of the Upper and Middle Reaches of the Channel.

40. **2. Channel Delays** - Even at the current level of traffic, vessels may experience delays upon entering the Channel at the "CC" Buoy in the Gulf of Mexico, or when departing their dock facility. The delays are caused by a number of reasons:

41. One-way traffic - The 400-foot width of the 36-mile inland Channel and the 800-foot width of the 32-mile offshore Bar Channel restrict large vessels to one-way traffic.

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<sup>11</sup>In a November 12, 2002 filing, the District stated that it had reached an agreement in principle with Hackberry LNG that resolves its concerns regarding increased LNG vessel traffic. Under the agreement, Hackberry LNG will pay wharfage fees of \$0.0015 per dekatherm of natural gas delivered to the terminal, with an estimated yearly revenue of \$821,250 based on design throughput, but in no instance less than \$410,625.

This is a result of the U.S. Coast Guard requirement for a Moving Safety Zone around LNG vessels, and the Lake Charles Pilots practice of applying a moving safety zone for all large vessels in the Channel. Vessels must travel from 55 to 68 miles from the "CC" Buoy to reach their docking facilities.

42. Tides - Deep draft crude oil tankers (which comprise approximately 30 percent of Channel traffic) must travel on a rising (flood) tide when delivering product to the Conoco or CITGO refineries. The inbound transit cannot commence until 2½ hours after low tide.

43. Insufficient tugs - Two conventional tugs are required for all large vessels from MP 23 to their docks, while an LNG vessel requires a third tug for turning and docking. Until recently, only four conventional tugs serviced the Channel, thereby limiting movements to two vessels in this region. Other vessels could not move past MP 23 when the third tug was occupied with docking an LNG vessel.

44. Weather - Restrictions on vessel movements due to fog or high winds can occur on up to 40 days per year.

45. Daytime only transit for LNG vessels - This practice by the pilots may cause a delay for LNG vessels if they arrive at the "CC" Buoy outside the transit window, and a delay when LNG vessels are ready to depart the Trunkline LNG terminal before sunrise. The daylight only outbound LNG vessel transit can subsequently delay other inbound vessels from a few minutes up to a maximum of 4.5 hours (EA page 3-56).

46. Vessel loading delays - When a vessel of any type, with a pilot on board and tugs standing by, misses its scheduled departure time due to delays in loading product, it can cause a waiting inbound deep draft tanker to miss its tide window.

47. Security - Inspections by the U.S. Coast Guard boarding teams from Galveston may cause vessels to miss scheduled starting times from the "CC" Buoy.

48. **3. Mitigation** - Of the seven factors identified above which may cause vessel delays, only Insufficient tugs and Daytime only transit for LNG vessels can be uniquely attributed to current and future LNG vessel traffic. The remaining factors are common to a variety of vessels that use the Channel or to the general characteristics of the Channel. Various parties have suggested mitigation measures to address the delays attributable to LNG vessels.

49. Insufficient tugs - In July 2002, an additional conventional tug was brought into the Channel and placed in a limited lay-up and minimally manned status so that it is available when a fifth tug is needed (EA page 3-54). In addition, the EA recommended that Trunkline LNG file a plan for ensuring that the proposed expansion does not affect tugboat availability for non-LNG vessel traffic in the Channel (EA page 3-55). In its comments filed on the EA, Trunkline LNG proposed that the recommendation be reworded to require "a plan that sets forth the manner in which the requirements for tugs created by the additional LNG vessel traffic resulting from the proposed expansion will be met."

50. In its November 1, 2002 data response, BG LNG states that it is currently negotiating with tug owners/operators to purchase dedicated tug services using two new tractor tugs, with a higher specification than the conventional tugs currently servicing the Channel. While three conventional tugs are required to turn and dock an LNG tanker, only two high-spec tractor tugs can perform the same function. As a result, the number of tugs required during docking maneuvers would be the same for LNG vessels as the deep draft tankers at the Conoco and CITGO facilities, and allow the remaining tugs to service other traffic through the Upper Reach of the Channel.

51. BG LNG indicated that at the time of its filing, it was unable to provide correspondence to support its plans to secure dedicated tug services, due to the sensitive nature of the negotiations. Therefore, to ensure that the tug issue has been properly resolved, we have revised recommendation 25 of the EA and included it as condition 24 of the Appendix to this order.

52. Daytime only transit for LNG vessels - In a July 25, 2002 letter to BG LNG, Captain George W. Mowbray of the Lake Charles Pilots identified ways to improve traffic flow and reduce delays, including nighttime LNG transit. Critical to *regular* nighttime movements of LNG vessels is the installation of new Aids to Navigation in the vicinity of the Calcasieu River Intersection and Devil's Elbow (*i.e.*, replacement of a number of board type day ranges with day-night optical ranges). Further, use of the simulator model of the Calcasieu Ship Channel at Marine Safety International's training facility in Rhode Island will allow more pilots become adept at nighttime transit.

53. The July 25, 2002 letter also included a proposed procedure for nighttime transits: developing a list of vessels that meet established criteria; evaluation of current weather, tides, and other traffic; and the requirement for BG LNG to arrange for escort by the U.S. Coast Guard or Cameron Sheriff's Office for the entire inland Channel.

54. In a letter filed with the Commission on October 1, 2002, the Lake Charles Pilots affirm "that the channel can readily and adequately accommodate the additional LNG traffic." Further, the letter states that vast majority of the procedures identified in its July 25, 2002 letter are neither difficult nor expensive to implement. They "feel that the true issue is the timing and scheduling of traffic to minimize delays."

55. In its November 1, 2002 data response, BG LNG identified that it has funded the creation of a simulator model of the Channel at the Marine Safety International facility in Middletown, Rhode Island. The Channel model was completed in August 2002, and full course training scheduled to commence in November 2002. Each course provides training for four pilots, two tug masters, and two ship masters over a 4-day period. The objectives of the simulator training include: increasing the level of experience of individual pilots in handling various LNG vessels through certain areas of concern; practicing nighttime LNG vessel transits to evaluate feasibility and identify areas in need of improvement; and adding to and improving Aids to Navigation in the Channel. In addition, BG LNG has offered to provide access to the simulator for other users of the Channel.

56. BG LNG and Trunkline LNG have initiated dialogue with the Lake Charles Pilots and the Calcasieu River Waterway Harbor Safety Committee (Harbor Committee) regarding the installation of Aids to Navigation in the vicinity of the Calcasieu River Intersection and Devil's Elbow. Their plan is to assess various Aids to Navigation at the Marine Safety International facility, and allow the pilots to determine the optimum locations, color, height, and sizes during actual daytime and nighttime simulations. Based upon the results of the simulation, the Harbor Committee will recommend to the U.S. Coast Guard what actual Aids to Navigation should be applied.

57. BG LNG stated that it would comply with requirements for vessel escort when nighttime LNG transits commence, to the extent that the Lake Charles Pilots determines that an escort is necessary. If an escort is not available from the U.S. Coast Guard or Cameron Sheriff's Office, escort could be provided by a non-law enforcement agency vessel. In addition, the LNG vessels that BG LNG has under charter or under construction represent new generation vessels designed with improved visibility from the bridge and better maneuverability characteristics than older vessels.

58. The measures sponsored by BG LNG and Trunkline LNG, in cooperation with the Lake Charles Pilots and the Harbor Committee, represent positive steps toward implementing nighttime LNG transits and overall improvements for all Channel users. In order to ensure that the measures will be implemented, an additional condition has been added as condition 25 in the Appendix to this order which requires Trunkline LNG

to file a plan with the Commission and the U.S. Coast Guard, with a schedule for providing improved Aids to Navigation in the Channel and for implementing procedures for nighttime transits proposed by the Lake Charles Pilots.

59. In conclusion, a variety of factors, some of which are unavoidable, currently cause a certain level of delays for vessels using the Channel. With the above mitigation measures, the operation of LNG vessels should have an impact on Channel traffic similar to the impact of the large vessels or the deep draft crude tankers used by Conoco and CITGO. Further, certain mitigation measures, such as use of the simulator model of the Channel, the dedicated tractor tugs, and improved Aids to Navigation, will benefit all Channel users and may reduce some of the sources of current vessel delays.

60. **4. Socioeconomic Impact** - The principal complaint raised by Conoco, CITGO, and the District is that the additional LNG vessels will cause congestion in the Channel that will result in significant adverse financial effects. Conoco does not object to the proposed project, but its concern is directed to the adverse economic impacts on vessel traffic. Conoco offers mitigation measures for Trunkline LNG to adopt or pursue.

61. In its comments on the EA, Conoco estimated that the Trunkline LNG Expansion Project would cost \$1.54 - \$1.68 million annually in combined demurrage and increased shipping; while CITGO commented that the increased demurrage costs could approach \$20 million per year. Both estimates are derived from the product of (a) average daily vessel demurrage rates and daily operating costs for vessels, and (b) estimated "vessel wait times." The "vessel wait times" were estimated in the Simulation Study that was prepared for Conoco and filed on August 30, 2002, in its comments on the EA.

62. Trunkline LNG filed reply comments questioning the accuracy of the Simulation Study. Specifically, it claims that the Simulation Study contains no description or discussion of the mathematical model or simulation software used; does not recognize the second dock in this proposal; uses 219 vessels instead of 175 for the expansion project; does not identify or did not include various model input parameters; and does not appear to validate the mitigation recommended by Conoco and CITGO. As a result, Trunkline LNG states that the Simulation Study does not substantiate the alleged economic effects of the expansion.

63. Instead of discussing the various flaws of the ship traffic studies, the Commission has relied on the facts discussed in the preceding section to fashion the described mitigation measures. With the imposition of these measures, which are intended to address the problems posed by insufficient tugs and present lack of nighttime LNG transit, the operation of LNG vessels will cause no more congestion or delays than other large vessels in the Channel or the deep draft crude tankers used by Conoco and CITGO.

As a result, an increase in LNG vessel traffic should have an impact similar to any corresponding increase in other large vessel traffic.

64. The District does not categorically oppose the project, but believes that Trunkline LNG has underestimated the adverse impacts of the significant increase in LNG vessel traffic, and that Trunkline LNG should be required to mitigate those effects in order to receive construction authorization. The District requests that the Commission condition approval upon consummation of an agreement between Trunkline LNG and the District similar to the wharfage agreement with Hackberry LNG. The District has stated that revenues from the throughput charged to Hackberry LNG will contribute to infrastructure improvements that may be necessary to accommodate the increased LNG vessel traffic. It would appear that the collection of such wharfage fees is within the jurisdiction of the District, and Commission action in this proceeding would not limit the authority of the District to impose similar fees on Trunkline LNG.

#### **5. Other Comments on Marine Traffic Issues in the EA**

65. Conoco comments that the Commission cannot exclude consideration of the combined impact of the Trunkline LNG Expansion Project and the Hackberry LNG Project, and urges that the Commission consolidate Trunkline LNG's application with the Hackberry LNG proposal in Docket No. CP02-374-00. The District comments that the EA did not consider the 210 LNG vessel increase from the Hackberry LNG Project and that it is unjust to force Hackberry LNG to mitigate the increase "since Hackberry has been more willing than CMS to work with the District in resolving the potentially negative impacts of its expansion proposal." CITGO states that a realistic assessment must take into account both the Trunkline LNG Expansion Project and the Hackberry LNG Project. We respond that the EA considered the cumulative impact of all planned or potential vessel increases by the ports on the Channel, including the Hackberry LNG proposal, and found the increase in vessel traffic to be within the capacity of the Channel (EA pages 3-44 to 3-45).

66. Conoco and CITGO recommend several mitigation measures for the Commission to impose on Trunkline LNG. In order to lift daylight-only LNG transit and provide 24-hour operations, they state that staff should consult with the U.S. Coast Guard, District, and Pilots to determine what investments would be needed such as improved navigation aids and ship simulators. We respond that this recommended mitigation has been adopted as condition 25 of the Appendix to this order.

67. To improve coordination among Channel users, instead of current "first come, first serve" policy, Conoco and CITGO maintain that staff's role is needed in advocating

a system to coordinate vessel arrival (either automated or non-automated) to optimize ship arrivals and departures. We note that in its October 2, 2002 filing, Trunkline LNG stated that the Harbor Committee was recently established and chartered to improve port and channel operation and the coordination of various capabilities and improvements. Membership includes the Lake Charles Pilots, tug operators, the U.S. Coast Guard, the U.S. Army Corps of Engineers (COE), the District, Trunkline LNG, Conoco, CITGO, and other entities on the Channel. The Harbor Committee has identified as a high priority the timing and scheduling of vessel traffic. One of the goals is to provide state-of-the-art navigation for the Channel. To this end the Harbor Committee has been evaluating how other ports have approached and implemented vessel traffic management schemes. The efforts by the Harbor Committee, rather than Commission staff, represent the proper forum for optimizing the management of ship arrivals and departures in the Channel.

68. Conoco and CITGO recommend that the Commission explore the construction of passing and meeting lanes at strategic points in the Channel to alleviate Channel congestion and contact the COE about such construction. We respond that the COE, which has the authority over dredging and widening the Channel, has informed staff that it has no plans to widen the Channel to establish passing and meeting lanes and that it has become difficult to find disposal sites even for current maintenance dredging activities for the Channel.

69. Conoco and CITGO recommend that the Commission impose tug conditions on Trunkline as recommended in the EA. The tug recommendation from the EA has been revised in condition 24 of the Appendix to this order to reflect the recent activity by BG LNG.

70. Conoco and CITGO recommend that the staff analyze tandem inbound and outbound travel for LNG vessels and that tandem travel and mooring of LNG tankers should be made mandatory. Current practice is to convoy inbound and outbound vessels of all types whenever possible. Depending on vessel schedules, improvements in traffic flow can be gained by pairing an LNG vessel with a deep draft crude tanker or other vessel. Nevertheless, consideration of tandem travel is a subject for the Lake Charles Pilots who manage the Channel traffic.

71. CITGO states that consideration should be given to a scheduling system that gives priority to non-LNG tankers, based on the fact that users such as CITGO (and Conoco) are pre-existing facility operators. We respond that Trunkline LNG began operation in 1982 and may also be considered a pre-existing facility and that the Commission has no authority to grant priority to any type of vessel in the Channel.

72. CITGO comments that the Trunkline LNG project must be deemed the incremental user that is responsible for the incremental costs caused by the project, and the costs of any mitigation measures. We find that the Trunkline LNG expansion does not make it any more of an "incremental user" than the expansions planned by CITGO, Conoco, and the District.

73. The District comments that the EA contains no real analysis of: a) the effects of tides on the ability of different types of vessels to enter the Channel; b) what percentage of LNG vessels require tugboats and how many; c) whether LNG vessels raise different management concerns than other vessels; d) the willingness and ability of pilots to operate LNG vessels, either day or night; e) the effect of the number of pilots and shifts on vessel management issues.

74. We respond that the effect of tides was addressed in the EA (page 3-56), and is more fully discussed in this order. Deep draft crude oil tankers must travel on a rising (flood) tide in delivering product to the Conoco or CITGO refineries, and cannot begin the inbound transit until 2½ hours after low tide. LNG vessels are not affected by tides. b) Tug requirements for LNG vessels are identified in Table 3.9-7 of the EA for seven segments of the inbound and outbound transit and for docking. Page 3-54 of the EA identified that approximately 20 percent of the LNG vessels had used tug escort through the Middle Reach, a requirement of one of the previous shippers that is not part of the current contract. c) d) and e) As discussed earlier in this order, BG LNG has funded the creation of a simulator model of the Channel at the Marine Safety International facility to provide training for pilots, tug masters, and ship masters, which will increase the level of experience of individual pilots in handling various LNG vessels and practice nighttime LNG vessel transits. In a September 24, 2002 letter to the Commission, the Lake Charles Pilots stated that they would take appropriate measures to ensure the requisite pilots are available.

75. The District states that the EA findings under "Moving Safety Zone" and the mention of Trunkline LNG's suggestion to install "second unloading dock to allow convoying of LNG vessels" do not comport with operational realities in the Channel. The District states that the fact that no vessel can enter the Channel when an LNG vessel is outbound will minimize the ability of pilots to "convoy" if Trunkline LNG builds a second unloading dock. The District adds that convoying is not an option for LNG vessels due the fact that one LNG vessel requires three tugboats while the Channel has only five tugboats available. As identified on page 3-55 of the EA and discussed previously in this order, the Lake Charles Pilots impose a moving safety zone requirement on all large vessels in the Channel similar to the U.S. Coast Guard's

requirement for a Moving Safety Zone around LNG vessels. As shown in Table 3.9-7 of the EA, the three tugboat requirement for LNG vessels only applies to the turning and berthing phase and, with the inclusion of condition 24 of this order, should not be an obstacle to convoying LNG vessels with other vessels.

76. The District comments that wind and fog restrictions occur more frequently than the 20-40 days stated in the Lanier Study. We respond that data for inbound daily vessel traffic during a 20-month period from 1999 to 2001 show that there was no vessel traffic on 38 days, indicating that the wind and fog restrictions are reasonable.

77. The District comments that the EA erroneously concluded the Lake Charles Pilots are in charge of Channel capacity and managing the vessel traffic system. The District states that it has jurisdiction over the Channel under state law. The extent of the District's jurisdiction is not ours to decide. However, we note that the Lake Charles Pilots have operated the Channel vessel traffic system since 1982.

78. Based on the discussion above and in the EA, we conclude that if constructed and operated in accordance with Trunkline LNG's application and supplements, approval of this proposal would not constitute a major Federal action significantly affecting the quality of the human environment.

79. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this order's authorization. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.<sup>12</sup> Trunkline LNG 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 Trunkline LNG. Trunkline LNG shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

#### IV. CONCLUSION

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<sup>12</sup>See, 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., et al.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

80. The August 27, 2002 order made preliminary findings based on non-environmental issues related to Trunkline LNG's application. This order completes the environmental review of the proposal. Thus, we are able to determine that the proposed facilities are in the public interest. This order incorporates the findings with respect to the non-environmental issues contained in the August 27 order and constitutes our final decision on Trunkline LNG's requests for authorization under section 3 of the NGA.

81. At a hearing held on December 18, 2002, the Commission on its own motion received and made a part of the record in this proceeding all evidence, including the application and exhibits thereto, submitted in support of the authorizations sought herein, and upon consideration of the record,

The Commission orders:

(A) The District's request for rehearing of the August 27, 2002 order in Docket No. CP02-60-000 is denied.

(B) Trunkline LNG is granted authorization under section 3 of the NGA to construct and operate the proposed facilities, as more fully described in the August 27 order and in Trunkline LNG's application.

(C) Ordering Paragraph (B) authorization is conditioned on the following:

(1) Trunkline LNG completing the proposed facilities and placing them in service within three years of the date of the final order in this proceeding, pursuant to section 157.20 (b) of the Commission's regulations;

(2) Trunkline LNG complying with all the applicable regulations under the NGA in Parts 154, 157 and 284, especially paragraphs (a), (c), (e), and (f) of section 157.20 of the Commission's regulations;

(3) Trunkline LNG filing actual tariff sheets 60 days prior to placing the facilities in service to bring its tariff in compliance with the revisions specified in the August 27 order;

(4) Trunkline LNG making an NGA rate filing after three years of operation to justify its FTS-2 and ITS-2 recourse rates;

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(5) Trunkline LNG's compliance with the specific environmental conditions listed in the appendix to this order.

( D ) Trunkline LNG shall notify the Commission's environmental staff by telephone and/or facsimile of any environmental noncompliance identified by other Federal, state, or local agencies on the same day that such agency notifies Trunkline LNG. Trunkline LNG shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission.

( S E A L )

Linwood A. Watson, Jr.,  
Deputy Secretary.

## APPENDIX

## Environmental Conditions for Trunkline LNG's Project

1. Trunkline LNG shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the environmental assessment, unless modified by this Order. Trunkline LNG must:
  - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
  - b. justify each modification relative to site specific conditions;
  - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
  - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification.**
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
  - a. the modification of conditions of this 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. **Prior to any construction,** Trunkline LNG 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 Chief Inspector's environmental authority and have

been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. Trunkline LNG must receive written authorization from the Director of OEP **before commencing construction** of the project. Such authorization will only be granted following a determination that all pre-construction conditions have been satisfied.
5. Trunkline LNG must receive written authorization from the Director of OEP **before commencing service** from the project. Such authorization will only be granted following a determination that rehabilitation and restoration of the facility site is proceeding satisfactorily.
6. **Within 30 days of placing the authorized facilities in service**, Trunkline LNG 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 Trunkline LNG has complied with or will comply with. This statement shall also identify any areas where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
7. **Prior to construction**, Trunkline LNG shall file with the Secretary a site-specific Soil Erosion and Sediment Control Plan.
8. **Prior to construction**, Trunkline LNG shall file with the Secretary a site-specific onshore Spill Prevention Containment and Countermeasure Plan, that meets the requirements of the Commission staff's Wetland and Waterbody Construction and Mitigation Procedures.
9. **Prior to construction**, Trunkline LNG shall file with the Secretary a site-specific Construction Stormwater Pollution Prevention Plan.
10. Trunkline LNG shall file a noise survey with the Secretary **no later than 60 days** after placing the expansion facilities in service. If the noise

attributable to the operation of the expansion facilities exceeds an  $L_{dn}$  of 55 dBA at any nearby NSAs, Trunkline LNG shall file a report on what changes are needed and should install additional noise controls to meet the level **within 1 year** of the in-service date. Trunkline LNG shall confirm compliance with the  $L_{dn}$  of 55 dBA requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

11. The new, modified, and replacement facilities associated with the expansion project shall comply with the 2001 Edition of NFPA 59A except where the 1996 Edition is more stringent.
12. **Prior to commencement of service**, Trunkline LNG shall ensure and verify that the existing and new spill containment and impoundment systems are capable of providing for a 10-minute spill at maximum design flow conditions including a full bore break in the unloading line at 55,000 gallons per minute in areas containing the unloading line.
13. Trunkline LNG shall provide the new 880,000-barrel LNG storage tank with relative movement indicators for the inner vessel. Both radial and rotational off-center movement indicators shall be provided. Maximum movement criteria shall first be established prior to cooldown of the tank. Measurements of relative movement vs temperature and time taken during tank cooldown shall be submitted to the Commission staff.
14. Trunkline LNG shall provide the new 880,000-barrel LNG storage tank with a separate discretionary vent independent of the existing LNG storage tanks. Trunkline LNG shall ensure that the new LNG storage tank can be isolated from the common vapor header and the existing storage tanks if necessary.
15. If the temperature of any region of any LNG storage tank outer containment vessel becomes less than the minimum acceptable operating temperature for the material (specified by Trunkline LNG to be 15EF), Trunkline LNG shall notify the Commission staff on a timely basis and procedures for corrective action shall be identified.
16. Trunkline LNG shall perform a foundation elevation survey for the new 880,000-barrel LNG storage tank on an annual basis for a period of 3

years; future survey scheduling to be determined by the results of measurements.

17. Trunkline LNG shall develop and incorporate a single contingency procedure for both existing and proposed storage tanks for a potential crack in the outer shell or roof. Procedures shall be incorporated in the Emergency Procedure Manual. Ensure that materials and equipment needed to affect an emergency repair are available on site.
18. Trunkline LNG shall ensure that all hazard detectors are installed with redundancy in all potentially hazardous areas and/or enclosures.
19. Trunkline LNG shall develop procedures for offsite contractors working at the site while the plant is operating. Clearly define contractor responsibilities, restrictions, limitations, and supervision of offsite personnel by Trunkline LNG staff. Define staff responsibilities and assurance of appropriate deactivation and reactivation of safety systems to accommodate construction.
20. Operating and maintenance procedures and manuals, as well as emergency plans and safety procedure manuals, shall be filed with the Secretary **prior to active operation** of the expansion facilities.
21. Progress on the expansion 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 Commission on a timely basis. Additional site inspections and technical reviews will be held by Commission staff **prior to commencement of operation** of the expansion facilities.
22. The facility shall continue to be subject to regular Commission staff technical reviews and site inspections on at least a biennial basis or more frequently as circumstances indicate. Prior to each Commission staff technical review and site inspection, Trunkline 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, provision of 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 semi-annual report.

23. Semi-annual operational reports shall continue to 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, boiloff/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, nonscheduled maintenance or repair (and reasons therefor), relative movement of storage tank inner vessels, vapor or liquid releases, fires involving natural gas and/or from other sources, negative pressure (vacuum) within a storage tank and higher than predicted boiloff rates. Adverse weather conditions and the effect on the facility also shall be reported. Reports shall be filed within 45 days after each period ending June 30 and December 31.

In addition to the above items, a section entitled "Significant plant modifications proposed for the next 12 months (dates)" also shall be included in the semi-annual operational reports. Such information would provide Commission staff early notice of anticipated future construction/maintenance projects at the LNG plant.

24. **Prior to commencing construction**, Trunkline LNG shall file with the Secretary and the U.S. Coast Guard the plan for providing dedicated tug services.
25. **Prior to commencing construction**, Trunkline LNG shall file with the Secretary and the U.S. Coast Guard a plan with a schedule for providing improved Aids to Navigation in the Channel, and for implementing the procedures for nighttime LNG transits proposed by the Lake Charles Pilots.