



United States Department of the Interior



NATIONAL PARK SERVICE
Palo Alto Battlefield National Historical Park
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Brownsville, TX 78520

1.A.2.

February 5, 2016

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Texas LNG, Port of Brownsville, TX, Docket No. PF15-14-000, Draft Resource Reports

Dear Ms. Bose:

This constitutes the National Park Service (NPS) response to the Federal Energy Regulatory Commission (FERC), Texas LNG Brownsville Project, Docket No. PF 15-14-000, Draft Resource Reports.

GENERAL COMMENTS

The NPS comments and recommendations regarding the Texas LNG draft resource reports will focus primarily on the potential impacts to Palo Alto Battlefield National Historical Park and National Historic Landmark (NHL) and Palmito Ranch Battlefield NHL.

The NPS is aware that the U.S. Fish and Wildlife Service (FWS) is developing, and will be submitting to FERC, comments and recommendations on the Texas LNG draft resource reports. The NPS seeks to provide a coordinated view from the Department of the Interior. The NPS concurs with the comments and recommendations of the FWS and recommends that the materials submitted by FWS be fully integrated into the environmental impact statement for the Texas LNG project.

The applicant frequently refers to details and decisions throughout the draft resource reports that will not be made available until the applicant's final application is submitted. The NPS anticipates that we will have additional comments and recommendations when those details become available and expect that FERC will give our future comments and recommendations full consideration.

SPECIFIC COMMENTS

Draft Resource Report 1: General Project Description

Section 1: Purpose and Need

The applicant projects that the facility will employ 80 permanent positions during Phase I operation and 110 permanent employees during Phase 2 facility operation. The NPS would like to know if the Texas LNG has any projections of how many of these permanent positions would be filled by people already living in the local community. If so, what is the median annual or hourly salary for these positions?

The applicant also states as a benefit of the proposed project is that the project will

“... permit the displacement of existing and future coal, heavy fuel oil and diesel power generation, and displacement of heavy fuel oil, diesel, and gasoline for vehicles and marine engines, thereby reducing global greenhouse gas, sulfur oxides, nitrogen oxides, particulates, and other environmentally harmful emissions”.

Since the project as proposed would only “permit” the replacement of other kinds of fossil fuels, the applicant should not claim a benefit when it may be equally likely that the proposed project and emissions related to the manufacturing of LNG and its end use are additive to that from other fossil fuels. The NPS recommends that the applicant provide information on the amount of harmful emissions produced by the manufacturing of and energy production from the use of LNG in a comparative chart with other fossil fuels, as well as from other non-fossil fuel energy sources.

Finally with regards to the stated Economic Benefits, the NPS would like to know the estimated lifespan of the Texas LNG Terminal facility, along with projections on the supply and costs of natural gas and the market demand for Liquefied Natural Gas. The NPS also recommends that the applicant disclose if any tax abatements are proposed or if any have already been awarded.

Section 1.3: Proposed Project Facilities

The NPS suggests the applicant include a set of elevations drawings in this section.

Section 1.3.1: Gas Gate Station and Interconnect Facility

The applicant states their intention to receive the natural gas supply for the project from a non-jurisdictional intrastate natural gas pipeline. The NPS considers the delivery of natural gas integral to the operation of the Texas LNG terminal and therefore recommends that the details of the natural gas transmission line (route location, above ground structures, and environmental impact) be incorporated into the environmental impact statement for comment and review by the cooperating agencies and the public. In

addition, this referenced intrastate pipeline has yet to be constructed. If constructed, this pipeline would have an independent function and utility as its construction is to provide natural gas from the Agua Dulce Field to an interconnection with a Mexico-owned pipeline. The NPS suggests that the applicant demonstrate some level of commitment by the owner of the intrastate pipeline to provide natural gas to the Texas LNG facility.

Section 1.3.6: Water, Power, and Communications

The applicant reveals that the water supply for the facility will be provided by the Brownsville Navigation District by way of an 8-mile long water line, and that electricity will be supplied by a transmission line connected to the local electric transmission grid. The NPS considers the delivery of water and electricity integral to the operation of the Texas LNG terminal and therefore recommends that the details of the electric and water delivery systems (route locations, above ground structures, and environmental impacts) be incorporated into the environmental impact statement for comment and review by the cooperating agencies and the public. The NPS also recommends that the applicant include the details of the wastewater system be incorporated into the environmental impact statement for comment and review by the cooperating agencies and the public.

Section 1.3.7: Ancillary Structures

The applicant states that the proposed “Texas LNG is a non flaring plant, meaning that the flares are only used for start-up, shutdown, and non-routine venting of excess gas pressure”. The NPS would like to have an estimated annual occurrence for each of these flaring episodes. The NPS is concerned with the 315 ft. height of the Main Flare and would like more information on the design, along with the FAA lighting and paint color requirements.

Section 1.7.2.2: Project Site - Site Preparation

The applicant notes that “approximately 1.2 million cubic yards of imported fill will be required” for elevating the site. The NPS recommends that the location of the source of the fill material be identified and included in the environmental analysis of the project. The NPS is concerned that there may be impacts to cultural resources at the source site, and that the fill material is void of displaced cultural material and exotic plant material.

Section 1.9: Future Expansion and Abandonment Plans

Even though, if constructed, the Texas LNG project proponents have no plans to expand or stop operations, the NPS recommends that the applicant be required to commit to removal of the facility and restoration of the site to pre-project conditions should operations at the site ever cease.

Section 1.10: Non-Jurisdictional Facilities

The NPS reiterates that it considers these non-jurisdictional facilities integral to the operation of the Texas LNG terminal and therefore recommends that the details of these

facilities be incorporated into the environmental impact statement for comment and review by the cooperating agencies and the public.

Section 1.13: Cumulative Impacts

The NPS anticipates negative cumulative impacts to the viewsheds, nightskies, soundscapes, and cultural landscapes resources of both of the National Historic Landmark battlefields from the development of LNG terminals at the Port of Brownsville. On October 29, 2015 the NPS provided a detailed description of our concerns regarding cumulative impact analysis for the three proposed LNG terminals in pre-filing status to the respective FERC Project Managers. The NPS recommends that Texas LNG incorporate all of our concerns put forth in that document in the cumulative impact analysis for their project. Until these concerns are analyzed, and the details of the connected facilities (pipelines, utilities and access roads) are revealed, the NPS cannot concur with the applicant's numerous assumptions that the project's cumulative effects and impacts are short-term or minor.

Draft Resource Report 4: Cultural Resources

General: In addition to the potential indirect adverse impacts to the two mid-nineteenth century battlefield NHLs, the park service would like to express concern over the potential impact to the prehistoric archeological record of the Rio Grande Delta. The proposed Texas LNG terminal site contains one of the premier prehistoric archeological sites in Cameron County, the Garcia Pasture Site. The Garcia Pasture Site (41CF8), which is listed on the National Register of Historic Places, has known burials, discrete shell working areas, and contact period artifacts. The site has never been scientifically excavated, but rather all the information we know about the site comes from professional and amateur archeological surface collections.

The prehistoric archeological resources of the Rio Grande Delta lack prior widespread intensive professional investigations. This is due, in large part, to the absence of large federal projects such as the construction of reservoirs and other proposed undertakings. The few professional investigations performed confirm the generally ephemeral nature of the resources, as they are characterized by thin archeological deposits, low artifact densities, clay ball cooking features and elements, and small cemeteries that are buried in clay dunes and natural levees of all sizes. The handful of researchers that have studied this area agree that the prehistoric archeological record of the Rio Grande Delta is unique from other regions of the Gulf coast and needs further study. It is important that the cultural resource consultants working for Texas LNG do not use prehistoric sites from other regions of the Gulf coast as a baseline to make comparisons to determine or assign significance, integrity, or the research potential of any of the sites in the Rio Grande Delta. It is also important that the consultants have an accurate understanding of the geomorphologic processes that create and continually modify the clay dunes that contain the majority of the prehistoric archeological record in this portion of the delta. The prehistoric archeological record of the Rio Grande Delta is distinct from other regions of the Gulf coast, and must be understood and appreciated in its own terms. Unfortunately much of the prehistoric archeological record has been severely impacted or erased by

agricultural activities and urban development. If the three LNG terminals that are in pre-filing status proceed there is potential that another critical piece of the prehistoric archeological record is lost without gaining much needed insights and understanding of the people who occupied the Rio Grande Delta.

In general, the NPS is concerned the applicant and their consultants did not do a thorough enough job in researching and understanding the Garcia Pasture site, nor the prehistoric archeology of the Rio Grande Delta and deep South Texas. We also recommend the applicant consider and incorporate literature on clay dune formation and excavations in clay dunes, for example:

- Headrick, P., *The Archaeology of 41NU11...Long term Utilization of a Coastal Clay Dunes*. Studies in Archaeology 15. TARL. 1993.
- Hester, T. R., *Archeological Investigations in Kleberg and Kenedy Counties, Texas in August 1967*. State Building Comm., Archeological Program, Report No. 15. Austin. 1969.
- Hester, T.R.,. Loyola Beach: An Example of Aboriginal Adaptation to the Marine Environment of the Lower Texas Coast. *Florida Anthropologists*, Vol. 24, 3:91-106. 1971.
- Huffman, G. G. and W. Price Clay Dune Formation Near Corpus Christi, Texas. *Journal of Sedimentary Petrology* 19:118-127. 1949.
- Jackson, A.T. *The Cayo del Oso Site (41NU2), Volume 1, A Historical Summary of Explorations of a Prehistoric Cemetery on the Coast of False Oso Bay*. Center for Archeological Research, UTSA. Archeological Survey Report No. 350. 2004
- Mallouf, R.J. et al. *A Predictive Assessment of Cultural Resources in Hidalgo and Willacy Counties*. Texas Historical Commission. Archeological Survey Report 23. Austin. 1977.
- Price, W.A. Geomorphology of Depositional Surfaces, *Bulletin of the American Association of Petroleum Geologists*. 31: 1784-1800. 1947.
- Price, W.A. Physiochemical and Environmental Factors in Clay Dune Genesis. *Journal of Sedimentary Petrology* 33:766-778, 1963.
- Price, W.A. and L. S. Kornicker Marine and Lagoonal Deposits in Clay Dunes, Gulf Coast, Texas. *Journal of Sedimentary Petrology* 31:245-255. 1961.
- Ricklis, R.A. *Archeological Testing at the Callo de Oso Site, 41NU2, Nueces County, Texas*. Coastal Archeological Research, Inc. Corpus Christi. 1997

Section 4.2: Area of Potential Effect

The NPS considers a 1 mile APE for indirect affects for the two 190 ft. tall storage tanks; the two 150 ft. tall liquefaction trains; and the 400 ft. tall flare is insufficient due to the flat terrain of the area. The NPS anticipates that these structures will be visible from many portions of the Palmito Ranch Battlefield NHL as well as from the Palo Alto Battlefield NHP and NHL. Furthermore, if considered with the other two proposed LNG terminals, these structures will irrevocably change the undeveloped character of the landscape and dominate the viewshed.

Section 4.3: Previous Cultural Resource Investigations

It is the NPS' understanding that the A. E. Anderson Collection at the Texas Archeological Research Laboratory (TARL) contains a substantial amount of artifacts that can be directly attributed to site 41CF8. In addition, there are numerous articles published in the South Texas Archeological Society's journal "*La Tierra*" by professional and avocational archeologists on recent research and discoveries that shed light on the prehistoric cultures of the Rio Grande Delta.

Section 4.4: Cultural Resource Survey Results

Please see our comments on Appendix 4A

Appendix 4A:

The above comments pertain to Appendix 4A as well.

Appendix 4A, Abstract:

"supplemental investigation" is not a term the NPS is familiar with in 36 CFR Part 800 or Section 106 of NHPA, or for that matter in other appropriate federal regulations. Since 41CF8 is already listed on the NRHP, this suggests that what NRG, LLC is doing is reevaluating the significance of the site for some unstated reason.

In addition, surface archeological data does not necessarily equate with "disturbed contexts," and we recommend the text be revised accordingly.

Appendix 4A, Section 1.1: Overview

It is the NPS' experience that it is not normal to conduct "testing" on sites already listed on the NRHP. It is our understanding that any work done at an NRHP-listed site would constitute data recovery, not "supplemental testing". Has FERC consulted with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) on this data recovery work done in the guise of "testing"?

Appendix 4A, Section 1.2: Management Recommendations

The NPS is concerned with the conclusion that 41CF8 was "not inhabited or utilized as extensively as previously thought", as well as with the estimation that Areas 1 and 5 are the only contributing elements to the significance of the site. As previously mentioned, it is our understanding that the A. E. Anderson Collection at the Texas Archeological Research Laboratory (TARL) contains a substantial amount of artifacts directly attributed to site 41CF8. Furthermore, archeologists with a working knowledge of the area have long since considered 41CF8 to be a site possessing archeological significance and research values critical to the understanding of the late prehistoric and protohistoric indigenous cultures of the delta. Consequently, the NPS recommends that the Texas LNG consultants, representatives of FERC, representatives of the Texas SHPO, and

professional and avocational archeologists with in-depth knowledge of the site and the region confer to put on record the sites research significance.

Appendix 4A, Section 3.1: Prehistoric Context

The NPS recommends this section be substantially revised and amended to focus on the archeology of the Rio Grande Delta and immediately adjacent areas, not derived from surrounding regions (such as central Texas and even East Texas).

Appendix 4A, Section 4.3.1.3: Late Prehistoric Period (A.D. 800 to 1500)

Would not temper data on the recovered sherds have allowed the determination of the temporal and cultural affiliation of the pieces?

Appendix 4A, Section 5.1: Previous Investigations

The NPS would like to know if NRG examined any of the artifacts collected from 41CF8 by the Texas State Historical Survey Committee investigations.

Appendix 4A, Section 5.3: Supplemental Investigations at 41CF8

The NPS is of the opinion that if the purpose of the “supplemental” investigations at 41CF8 were to assist in the development of a mitigation/data recovery plan, then it would seem important to look at all site areas in comparable detail, not just examine “an adequate sample of the site area.”

Appendix 4A, Section 5.3.1.1: Surface Collection

How is it possible that bottle and container glass sherds cannot provide information on their age, when glass artifacts from historic contexts are usually readily identified by age? What color were the glass sherds? Machine-made or blown? Any mold seams or lettering?

Appendix 4A, Section 5.3.1.2: Shovel Tests

It is unlikely that the sherd mentioned on this page is part of a Rockport vessel if it is bone-tempered (see Ricklis’ 2013 article in the *Bulletin of the Texas Archeological Society* on Rockport ceramics).

Appendix 4A, Section 5.3.1.3: Test Units

The NPS would like to know why no test units were excavated in Area 2. Do bone and shell pieces recovered have to have evidence of human manufacture to be considered of cultural origin? Perhaps they were discarded food remains? Why were none of the bone or shell artifacts recovered in the test units submitted for C14 analysis, so as to be able to determine their age?

Appendix 4A, Section 6.0: Conclusions

The NPS is concerned that the level of effort in Areas 2-4 at 41CF8 is not sufficient to allow a determination that they represent non-contributing elements of the NRHP character of the overall site. We recommend that more intensive sub-surface investigations be conducted before the NRG recommendation can be sustained.

Appendix 4A, Section 7.0: References

Some errors in this section such as “Tunnel” instead of “Tunnell” or Turner’s name being misspelled nor referencing the 2011 publication.

Draft Resource Report 5: Socioeconomics

Section 5.2.2: Economy and Employment

The applicant notes that Cameron County suffers from high unemployment and a low-paid work force. The applicant also states that 80% of the project workforce will be sourced locally. What is the percentage of the locally sourced workforce for the construction phase versus the operation phase? What is the median annual or hourly pay rate for the locally sourced construction workforce and the locally sourced operation workforce?

Is there an anticipated lifespan for this type of LNG facility? The NPS suggests the applicant provide projections on the supply and costs of natural gas and the market demand for Liquefied Natural Gas. The NPS also recommends that the applicant disclose if any tax abatements are proposed or if any have already been awarded.

Draft Resource Report 8: Land Use, Recreation, and Visual Resources

Section 8.3: Aesthetics and 8.7: Cumulative Impacts (Visual)

We appreciate the proposed mitigation measures of recessive paint and downward-oriented, shielded lighting to minimize visual effects, but we are concerned that the potential effects of gas flaring on night skies are not yet adequately addressed. The potential flaring of gas at night is mentioned in Section 8.3, and in Section 8.7, it is acknowledged that if flaring from two or more flare stacks were to occur simultaneously, significant increases in visual impacts could occur. However, we believe that even a single exposed gas flare can create substantial visual and sky glow effects at night.

We ask that more information on lighting mitigation be included, and the effects from the tall flare stacks (315 and 180 feet) be better addressed and mitigated, to the extent possible. To prevent potential cumulative impacts or adverse effects on historic properties from light, we recommend the following minimization (direct mitigation) measures at all phases of the LNG project, including construction.

- Light only where it is needed
- Light only when it is needed (consider using sensors or timers)

- Shield lights and direct them downward
- Use the minimum amount of light necessary
- Select lamps with warmer colors (less blue light)
- Select the most energy efficient lamps and fixture
- Avoid unnecessary flaring of gas at night
- When flaring of gas is required, use a screen or enclosed combustion chamber ("combustor") to prevent adverse visual effects on historic properties

Please be aware that the NPS anticipates cumulative adverse impacts to the cultural landscapes, viewsheds, soundscapes, and night sky resources associated with the two National Historic Landmark battlefields.

Draft Resource Report 9: Air Quality and Noise

The NPS has no comments on Resource Report 9 at this time, but may address potential impacts air and noise resources in the Environmental Impact Statement.

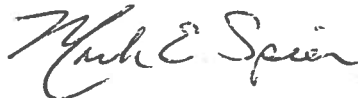
Resource Report 13: Additional Information Related to LNG Plants

The NPS is not able to provide meaningful comments to Resource Report 13 given that the information provided has been significantly redacted.

CONCLUDING COMMENTS

The NPS appreciates the opportunity to comment on the draft resource reports produced by Texas LNG as part of the pre-filing process. The NPS looks forward to working with FERC staff through the review and consultation compliance process for the National Environmental Policy Act and the National Historic Preservation Act.

Sincerely,



Mark Spier
Superintendent

cc:

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