

121 FERC ¶ 61,053
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Egan Hub Storage, LLC

Docket No. CP07-88-000

ORDER ISSUING CERTIFICATE

(Issued October 18, 2007)

1. On February 20, 2007, Egan Hub Storage, L.L.C. (Egan Hub) filed an application under section 7(c) of the Natural Gas Act (NGA) for a certificate of public convenience and necessity authorizing it to expand its Acadia Parish, Louisiana storage facility by adding a fourth salt dome cavern and other facilities. The proposed project will increase the overall storage capacity of Egan Hub's storage complex by 10.5 billion cubic feet (Bcf) of natural gas and increase the maximum daily withdrawal rate by 200 million cubic feet (MMcf) per day, as more fully described in the application. Egan Hub also seeks authority to charge market-based rates for its storage services using the proposed expansion capacity and requests waiver of those parts of the Commission's regulations requiring the submission of cost data. For the reasons discussed below, we will grant the requested certificate and authorizations.

Background and Proposal

2. Egan Hub, a wholly owned subsidiary of Spectra Energy Corporation, is a limited liability company organized and existing under the laws of Delaware. Egan Hub is a natural gas company within the meaning of the NGA and is engaged in the storage and transportation of natural gas for others in interstate commerce.

3. Since it began providing natural gas storage service in 1996, Egan Hub has continually expanded its storage facilities which currently consist of three salt dome

storage caverns with a maximum storage capacity of 31.5 Bcf¹ (24 Bcf of working gas and 7.5 Bcf of cushion gas), a 55,170 horsepower compressor station, a header system connecting to seven interstate pipelines,² and associated interconnecting piping and appurtenant facilities.

4. The proposed fourth cavern project consists of: (1) constructing a new salt dome storage cavern with a working gas capacity of 8.0 Bcf and a total capacity of 10.5 Bcf; (2) expanding the capacity of its Line 73 header by constructing a 24-inch, 16.5-mile loop; (3) constructing a new meter and regulating (M&R) station to increase interconnect capacity with Texas Gas Transmission Corporation (Texas Gas); (4) constructing an upgrade to the existing Texas Eastern Transmission, LP (Texas Eastern) M&R station; and (5) constructing associated interconnecting piping and appurtenant facilities.

5. Egan Hub states that the new cavern will increase the overall capacity of its facility to 42 Bcf (including 10 Bcf of cushion gas) and increase its maximum daily withdrawal rate by 200 MMcf per day, from 2,500 MMcf per day to 2,700 MMcf per day.

6. The proposed 16.5-mile, 24-inch pipeline loop of its Line 73 header will originate at the Egan Hub facility and terminate at the Texas Gas M&R station. Egan Hub states that the increased header capacity will allow it to receive and deliver gas to LNG takeaway lines proposed in the area and to meet the increased demand for capacity at the Texas Eastern and Texas Gas M&R stations.

Rates and Services

7. Egan Hub proposes to continue charging market-based rates for storage and interruptible hub services pursuant to authorization granted in previous Egan Hub

¹ See *Egan Hub Partners, LP*, 77 FERC ¶ 61,016 (1996); 81 FERC ¶ 61,017 (1997); 95 FERC ¶ 61,395 (2001); 99 FERC ¶ 61,269 (2002); and 103 FERC ¶ 61,014 (2003).

² The Egan Hub facility is interconnected with the following pipelines: ANR Pipeline Company; Columbia Gulf Transmission Company; Florida Gas Transmission Company; Tennessee Gas Pipeline Company; Texas Eastern; Texas Gas; and Trunkline Gas Company.

proceedings.³ In support of its request, Egan Hub presented an updated market power analysis reflecting that after the proposed expansion is completed, Egan Hub would not be able to exercise market power in the relevant geographic and product markets.⁴

Notice, Interventions, and Comments

8. Notice of Egan Hub's application was published in the *Federal Register* on March 5, 2007 (72 Fed. Reg. 11,008). UGI Utilities, Inc. and Peoples Energy Wholesale Marketing, LLC, filed timely unopposed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's regulations.⁵ No party has opposed the proposal or made any comments.

Discussion

9. Since the proposed facilities will be used for the storage of natural gas in interstate commerce subject to the jurisdiction of the Commission, the construction and operation of these facilities is subject to the requirements of subsections (c) and (e) of section 7 of the NGA.

Certificate Policy Statement

10. The Commission's September 15, 1999 statement of policy on the Certification of New Interstate Natural Gas Pipeline Facilities provides guidance as to how it will evaluate proposals for certificating new construction.⁶ The Certificate Policy Statement established criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy

³ See, e.g., *Egan Hub Partners, L.P.*, 77 FERC ¶ 61,016, at 61,059 (1996); 81 FERC ¶ 61,017, at 61,121 (1997); 95 FERC ¶ 61,395, at 62,473 (2001); 99 FERC ¶ 61,269 (2002); and 103 FERC ¶ 61,014, at 61,058 (2003).

⁴ See Egan Hub's February 20, 2007 application at Exhibit I.

⁵ 18 C.F.R. § 385.214(a)(3) (2006).

⁶ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order clarifying policy*, 90 FERC ¶ 61,128, *order clarifying policy*, 92 FERC ¶ 61,094 (2000). (Certificate Policy Statement)

Statement explains that in deciding whether to authorize the construction of major new pipeline facilities, the Commission 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, and the avoidance of the unnecessary exercise of eminent domain or other disruptions of the environment.

11. Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its 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 the new pipeline. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, we will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will we proceed to complete the environmental analysis where other interests are considered.

12. As stated, the threshold requirement is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. All of Egan Hub's existing customers receive storage service under contracts with Egan Hub at market-based rates. These contracts will not change as a result of the proposal. Moreover, under its market-based rate proposal for the new capacity, Egan Hub will assume the economic risks associated with the project's costs. Thus, the Commission finds that Egan Hub has satisfied the threshold requirement of the Certificate Policy Statement.

13. Second, Egan Hub's storage project will not have any adverse impact on the service provided to Egan Hub's existing customers because the proposal will not result in any degradation in service to these customers. Further, the proposal will provide greater flexibility to Egan Hub's existing customers through increased header and interconnect capacity. Nor will Egan Hub's proposal have an impact on existing pipelines. The new storage facilities should benefit shippers by improving the flexibility and reliability of service, in addition to meeting expanded market demand. In addition, no existing storage company has protested Egan Hub's application.

14. Third, there should be minimal adverse impacts on landowners associated with proposal. Construction of the proposed cavern and the connecting freshwater, brine, and gas pipelines will take place entirely on lands currently owned by Egan Hub. Egan Hub

proposes to increase the capacity of the existing Line 73 header by constructing a 16.5-mile, 24-inch loop. Egan Hub currently retains a 50-foot permanent right-of-way (ROW) along portions of the route, and will not require any additional ROW in these sections, thereby minimizing disturbance to landowners and the environment. On the remainder of the route, Egan Hub will require an additional 15- to 20-foot permanent ROW. No landowner has intervened, protested, or commented on this application. Accordingly, we find that Egan Hub's proposed project meets the requirements of the Certificate Policy Statement and is required by the public convenience and necessity. Consequently, we will approve the proposal, as conditioned below.

Market-Based Rates

15. In prior orders, the Commission approved Egan Hub's request to charge market-based rates for its services based upon a finding that Egan Hub would not be able to exercise market power because of its small size, anticipated share of the market, numerous competitors, and its location in a production area.⁷ In this filing, Egan Hub proposes to continue charging market-based rates for its firm storage and interruptible hub services. It asserts that the requested expansion of working gas capacity at its storage facility from 24 Bcf to 32 Bcf, and the increase in peak day deliverability from 2,500 MMcf/d to 2,700 MMcf/d, will not alter the Commission's previous findings that Egan Hub lacks market power. In support of its claim, Egan Hub submits an updated market power analysis for the Gulf Coast region of Texas, Louisiana and Mississippi.

16. The Commission has approved market-based rates for storage services under the criteria set forth in the Commission's 1996 Alternative Rate Policy Statement,⁸ where applicants have demonstrated that they lack significant market power or have adopted conditions that sufficiently mitigate market power.

17. Egan Hub's market power analysis for the firm storage market, as revised to

⁷ *Egan Hub Partners, L.P.*, 103 FERC ¶ 61,014 (2003); 99 FERC ¶ 61,269 (2002); 95 FERC ¶ 61,395 (2001); *Moss Bluff Hub Partners, L.P.*, 80 FERC ¶ 61,181 (1997); and *Egan Hub Partners, L.P.*, 77 FERC ¶ 61,016 (1996).

⁸ *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines (Alternative Rate Policy Statement)*, 74 FERC ¶ 61,076, *reh'g and clarification den.*, 75 FERC ¶ 61,024, *reh'g den.*, 75 FERC ¶ 61,066 (1996), *petition for review den.*, *Burlington Resources Oil & Gas Co. v. FERC*, Nos. 96-1160, 1998 U.S. App. Lexis 20697 (D.C. Cir. 1998).

reflect the additional working and operating capacity, considers the major elements contained in the Commission's Alternative Rate Policy Statement, including definition of the relevant product and geographic markers, a measurement of market share and concentration, and an evaluation of other relevant factors. Egan Hub's header system enables it to receive, store, and/or deliver gas to and from seven interstate pipelines to which it is interconnected. In addition, Egan Hub can make deliveries to interconnects with Targa Louisiana Field Services and NRG/Bayou Cove Peaking Power. Egan Hub's market power study identifies 56 active storage facilities in the relevant market area. The current combined market working gas capacity of all the facilities is 814,079 MMcf, with Egan Hub and its affiliates controlling 65,796 MMcf, a 6.3 percent market share. After the proposed expansion, Egan Hub and its affiliates will control 73,796 MMcf which is 8.8 percent of the combined market working gas capacity. Accordingly, Egan Hub's aggregate share of the relevant market will remain relatively small.

18. The Commission uses the Herfindahl-Hirschman Index (HHI) test to determine market concentration for gas pipeline and storage markets. The Alternative Rate Policy Statement states that a low HHI, generally less than 1,800, indicates that sellers cannot exert market power because customers have sufficiently diverse sources of supply in the relevant market. Thus, a low HHI suggests a lack of market power, and a high HHI (generally greater than 1,800) requires closer scrutiny in order to make a determination of lack of market power. Egan Hub's market power analysis shows a calculation of a post-expansion HHI of 1,157 for working gas capacity and HHI of 1,031 for peak day deliverability. These measures of market concentration are well below the Commission threshold level of 1,800, indicating that with its proposed expansion, Egan Hub would be unable to exert market power in the relevant market area.

19. Consistent with our prior orders, our approval of market-based rates is subject to reexamination if significant change occurs in Egan Hub's market power status, e.g., if Egan Hub adds storage capacity beyond the amount authorized in this order, an affiliate links storage facilities to Egan Hub, storage capacity held by affiliates increases, or Egan Hub or an affiliate acquires an interest in or is acquired by an interstate pipeline in Egan Hub's area.⁹ Such circumstances may affect Egan Hub's market power status and, accordingly, we will require Egan Hub to notify the Commission within 10 days of acquiring knowledge of any such changes. Such notification should include a detailed description of the facilities or affiliate increases and their relationship to Egan Hub.

⁹ *Copiah County Storage Co.*, 99 FERC ¶ 61,316 (2002); *Egan Hub Partners, L.P.*, 103 FERC ¶ 61,014 (2003); 99 FERC ¶ 61,269 (2002); 95 FERC ¶ 61,395 (2001); *Moss Bluff Hub Partners, L.P.*, 80 FERC ¶ 61,181 (1997); and *Egan Hub Partners, L.P.*, 77 FERC ¶ 61,016 (1996).

Request for Waivers

20. Because Egan Hub charges market-based rates, it requests continued waiver of Commission cost-based regulations, including: (1) section 284.7(e) (reservation charge); (2) section 284.10 (straight fixed-variable rate design methodology); (3) the accounting and reporting requirements of Part 201 and section 260.2 (Form 2A);¹⁰ (4) section 157.6(b)(8) (certificate applicants to submit cost and revenue data); (5) section 157.20 (c)(3) (file cost of new facilities); and (6) section 157.14 and 157.20(c)(3) (cost-based exhibits). Consistent with our findings in previous orders,¹¹ Egan Hub's request for a continued waiver of compliance with these regulations is granted. However, Egan Hub is required to maintain sufficient records consistent with these waived requirements should such information become necessary.

Engineering

21. The Commission reviews the design capacity of proposed natural gas facilities to ensure that the design is appropriate. Commission staff completed an engineering analysis of Egan Hub's proposed salt dome cavern. Based on this analysis, we conclude that the facilities are properly designed to provide 10.5 Bcf of total storage capacity (8 Bcf working gas and 2.5 Bcf cushion gas). Further, we conclude that the natural gas facilities at Egan Hub are properly designed to withdraw up to 2,700 MMcf per day.

22. Based on our review, we conclude that the geological and engineering parameters for the underground natural gas salt cavern storage facilities proposed by Egan Hub are well-defined. The analysis shows that the proposed cavern location is well within the design criteria and confinement of the salt formation. Therefore, we conclude that the existing cavern arrangement would avoid pressure influence between caverns when the caverns are operated at full capacity and pressure.

¹⁰ Egan Hub is still required to file pages 520 and 520-A of its Form No. 2-A, reporting the gas volumes information which is the basis for imposing an annual charge adjustment (ACA) charge. See *Petal Gas Storage LLC* ¶ 119 FERC ¶ 61,227 (2007) and 118 FERC ¶ 61,253 (2007); *Mississippi Hub L.L.C.*, 118 FERC ¶ 61,099 (2007); and *Bobcat Gas Storage* 116 FERC ¶ 61,052 (2006).

¹¹ See *Egan Hub Partners, L.P.*, 95 FERC ¶ 61,395, at 62,473 (2001); 99 FERC ¶ 61,269, at 62,142 (2002); and 103 FERC ¶ 61,014, at 61,058 (2003). See also, e.g., *SG Resources Mississippi, L.L.C.*, 101 FERC ¶ 61,029, at 61,094 (2002).

23. Because salt deforms plastically in relatively short time frames, caverns will shrink over time. As stated in *A Brief History of Salt Cavern Use*,¹² large volume losses due to salt creep have occurred in natural gas storage caverns. Further, the Interstate Oil and Gas Compact Commission's *Hydrocarbon Storage in Mined Caverns* (IOGCC Report),¹³ states that monitoring to demonstrate cavern stability and successful hydrodynamic containment should be carried out throughout the life of the facility. In order to mitigate these concerns, Egan Hub shall conduct sonar surveys to monitor the cavern's size to insure that salt creep does not potentially damage the integrity of the cavern, resulting in lost gas and reductions in storage capacity. Additionally, the IOGCC Report states "[a]ll gaseous and/or liquid products injected into or withdrawn from the storage facility shall be metered using industry accepted standards. The measurements shall be counterchecked by product level measurement in the cavern (using the level versus volume curve)." Therefore, we will require Egan Hub to file an annual inventory verification study to help mitigate potential problems with storage facility.

Environmental Analysis

24. The Commission's staff prepared an environmental assessment (EA) for Egan Hub's proposal. The EA addresses geology and soils, wetlands and waterbodies, vegetation and wildlife, threatened and endangered species, cultural resources, land use, air and noise quality, safety, and alternatives. The EA was placed in the public record on July 12, 2007.

25. On April 9, 2007, the Commission issued a Notice of Intent to Prepare an Environmental Assessment for the Proposed Egan Fourth Cavern Project and Request for Comments on Environmental Issues (NOI). The NOI was mailed to about 200 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American groups; local libraries and newspapers; and landowners

¹² R.L. Thomas and R.M. Gehle, *A Brief history of Salt Cavern Use*, in 8th World Salt Symposium, Vol. I (R.M. Geertman ed., 2000), available at <http://www.solutionmining.org/smri.cfm?a=cms,c,124,1,3>.

¹³ The IOGCC is a multi-state government agency which promotes and encourages conservation and efficient recovery of domestic oil and natural gas resources while protecting health, safety, and the environment. The organization is comprised of twenty-nine oil and natural gas producing states and six associate member states. In November 1994, the IOGCC published the "*IOGCC Member State Regulation of Natural Gas Storage*" which summarizes the various state and federal statutes and regulations relating to the storage of natural gas underground.

in the vicinity of the proposed project. In response to the NOI, the Commission received two comments from federal agencies. The Natural Resources Conservation Service recommended that the U.S. Army Corps of Engineers be contacted concerning wetland impacts of the proposed project. As noted in the EA, Commission staff did so. The U.S. Fish and Wildlife Service suggested that Egan Hub restrict its construction to avoid the nesting season of colonial wading birds. The EA discusses Egan Hub's commitment to construct during the non-nesting season (September 1-February 15).

26. Based on the discussion in the EA, we conclude that if constructed and operated in accordance with Egan Hub's application and our recommended mitigation measures, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

27. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. 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.¹⁴ Egan Hub shall notify the Commission's environmental staff by telephone, email, or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Egan Hub. Egan Hub shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

28. At a hearing held on October 18, 2007, 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) A certificate of public convenience and necessity is issued to Egan Hub in Docket No. CP07-88-000 authorizing it to construct and operate the Egan Fourth Cavern Project, as described and conditioned herein, and as more fully described in the application.

¹⁴See, e.g., *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Comm'n.*, 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).

(B) The certificate issued in Ordering Paragraph (A) is conditioned upon:

(1) Egan Hub's compliance with all applicable Commission regulations under the NGA, particularly the general terms and conditions set forth in Parts 154 and 284 and paragraphs (a), (c), (e) and (f) of section 157.20, except that the requirements of section 157.20(c)(3) are waived.

(2) Egan Hub's compliance with the engineering and environmental conditions set forth in the appendices of this order.

(C) Pursuant to section 157.20(b) of the Commission's regulations, the facilities authorized in Ordering Paragraph (A) must be constructed and placed in service within one year of the date of the final order in this proceeding.

(D) Egan Hub's request for Commission authorization to continue to charge market-based rates for its storage and hub services is approved, subject to the conditions set forth herein.

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

(F) Egan Hub's request for waiver of the Commission's cost based regulations is granted, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Acting Deputy Secretary.

APPENDIX A
Egan Hub Storage, L.L.C.
Environmental Conditions

As recommended in the EA, this authorization includes the following conditions:

1. Egan Hub 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 EA, unless modified by this Commission Order. Egan Hub 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 delegation 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 Commission 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**, Egan Hub shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, Environmental Inspectors (EI), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.
4. Egan Hub shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have

not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by the Upland Erosion Control, Revegetation, and Maintenance Plan, and minor field realignments per property owner needs and requirements which do not affect other property owners or sensitive environmental areas such as wetlands.

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

- a. implementation of cultural resources mitigation measures;
 - b. implementation of endangered, threatened, or special concern species mitigation measures;
 - c. recommendations by state regulatory authorities; and
 - d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
5. Egan Hub shall file updated status reports prepared by the head 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 EI(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. a description of corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;

- e. a description of any landowner/resident complaints which may relate to compliance with the requirements of the order, and the measures taken to satisfy their concerns; and
 - f. copies of any correspondence received by Egan Hub from other federal, state or local permitting agencies concerning instances of noncompliance, and Egan Hub's response.
6. Egan Hub 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 right-of-way and other areas of project-related disturbance are proceeding satisfactorily.
7. **Prior to construction**, Egan Hub shall file, for the review and written approval of the Director of OEP, documentation of updated endangered species consultation with the US Fish & Wildlife Service.
8. Egan Hub shall defer construction and use of the Highway 97 and Highway 100 wareyards until Egan Hub files with the Secretary, the Louisiana State Historic Preservation Office's comments on these wareyards.
9. **Prior to construction**, Egan Hub shall file, for the review and written approval of the Director of OEP, a compliance and mitigation plan for NSAs 1, 2, and 3, indicating how noise levels attributable to well drilling would be controlled at these NSAs, or alternatively, what mitigation would be offered to the residents of the NSAs.

APPENDIX B
Egan Hub Storage, L.L.C.
Engineering Conditions

1. The maximum inventory of natural gas stored in Egan Hub's Cavern IV shall not exceed the certificated levels of 10.5 Bcf at 14.73 psia and 60° F; the maximum gas storage shut-in stabilized pressure gradient of Cavern IV shall not exceed 0.9 psi/ft.
2. The final gas storage operating capacity of each cavern, working gas capacity, cushion gas capacity and the minimum pressure should be determined after cavern's operating parameters are determined and filed with the Commission (include data work papers to support the actual operating capacity determination).
3. Before commencing gas storage operations in Cavern IV, Egan Hub shall:
 - (a) Conduct a Mechanical Integrity Test for the cavern before initiation of each well/cavern to natural gas storage, and file the results with the Commission;
 - (b) File with the Commission copies of the latest interference tracer surveys, or other testing or analysis on each cavern to verify the lack of communication between the caverns;
 - (c) Establish and maintain a subsidence monitoring network over the proposed caverns storage area; and,
 - (d) Assemble, test and maintain an emergency shutdown system.
4. Twice annually, Egan Hub shall conduct a leak detection test during storage operations to determine the integrity of each cavern, well bore, casing and wellhead, and file the results with the Commission until one year after the storage inventory volume reaches or closely approximates the full authorized capacity, unless otherwise ordered by the Commission.
5. Each cavern's well will be periodically logged to check the status of each casing string. Additionally, every five years Egan Hub shall conduct sonar surveys of the caverns to monitor their dimensions and shape, including the cavern roof, and to estimate pillar thickness between openings throughout the storage operations and file the results with the Commission.
6. Egan Hub shall conduct an annual inventory verification study on each cavern, and file results with the Commission.
7. The Egan Hub Storage Project shall be operated in such a manner as to prevent and minimize gas loss or migration.

8. Egan Hub shall file with the Commission semi-annual reports (to coincide with the termination of the injection and withdrawal cycles) containing the following information in accordance with section 157.214 (c) of the Commission's regulations (volumes shall be stated at 14.73 psia and 60 °F, and pressures shall be stated in psia):
 - (a) The daily volume of natural gas injected into and withdrawn.
 - (b) The inventory of natural gas and shut-in wellhead pressure for each cavern at the end of each reporting period.
 - (c) The maximum daily injection and withdrawal rates experienced for the entire storage field during the reporting period; and, the average working pressure on such maximum days taken at a central measuring point where the total volume injected or withdrawn is measured.
 - (d) The results of any tests performed to determine the actual size, configuration, or dimensions of the storage caverns.
 - (e) A discussion of current operating problems and conclusions.
 - (f) Other data or reports which may aid the Commission in the evaluation of the storage project.

9. Egan Hub shall continue to file the above semi-annual reports in accordance with section 157.214(c) of the Commission's regulations for a period of one year following the date facility operation at maximum level is initiated.