

115 FERC ¶ 61,218
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Nora Mead Brownell, and Suedeen G. Kelly.

Unocal Windy Hill Gas Storage, LLC

Docket Nos. CP06-19-000
CP06-20-000
CP06-21-000

ORDER ISSUING CERTIFICATES

(Issued May 19, 2006)

1. On November 2, 2005, Unocal Windy Hill Gas Storage, LLC (Windy Hill) filed an application for a certificate of public convenience and necessity under section 7(c) of the Natural Gas Act (NGA) to construct and operate a salt bed natural gas storage facility near the City of Brush!, Morgan County, Colorado, and an associated header system to interconnect the proposed storage facility with the interstate pipeline grid. Windy Hill also requests a blanket certificate under subpart G of Part 284 of the Commission's regulations to provide open-access storage services and a blanket certificate under subpart F of Part 157 that will permit Windy Hill to perform routine activities in connection with the construction, maintenance and operation of the storage facilities. In addition, Windy Hill requests authority to charge market-based rates for its storage services.

2. We find that approval of Windy Hill's project is in the public interest because it will provide additional high deliverability storage in the Rocky Mountain region, thereby enhancing competition and reliability. Further, based on the environmental assessment (EA) prepared for Windy Hill's proposal, we find that, with appropriate mitigation, it is environmentally acceptable. In addition, we find that Windy Hill may charge market-based rates for its storage services based on evidence that Windy Hill lacks significant market power in the relevant market area. Therefore, we will grant the requested certificate authorizations as modified and conditioned in this order.

I. Background

3. Windy Hill is a newly-created limited liability company organized under the laws of the State of Delaware. Windy Hill is a wholly-owned subsidiary of HUTTS, LLC, a Delaware limited liability company, which is owned by Union Oil Company of California (Union Oil), a California company. Union Oil, in turn, is a wholly-owned subsidiary of Unocal Corporation, a Delaware corporation, which is wholly-owned by Chevron Corporation, a Delaware corporation.

4. The corporate family to which Windy Hill belongs owns and operates Unocal Keystone Gas Storage, LLC, a bedded-salt natural gas storage facility in Texas that provides intrastate service pursuant to regulation by the State of Texas and interstate service pursuant to a limited jurisdiction blanket certificate issued by the Commission in Docket No. CP02-317-000.¹ In addition, Chevron operates and owns a 93 percent working interest in the Aitken Creek Gas Storage Reservoir in British Columbia, Canada, with 48 Bcf of storage capacity and over 400 MMcf per day deliverability. Chevron also owns a 43 percent non-operating working interest in the Alberta Hub, a natural gas storage facility located near Edson, Alberta with 37 Bcf of capacity.

II. The Proposal

A. Facilities

1. Storage Caverns

5. Windy Hill proposes to construct, in two phases, four salt bed gas storage caverns, which will be located near the City of Brush¹ in Morgan County, Colorado. Each cavern will have a primary configuration diameter of 260 feet and a height of 226 feet. The tops of the caverns will be located approximately 6,000 feet below the ground surface.

6. Each of the four caverns will be capable of storing approximately 2.39 Bcf of natural gas, consisting of approximately 1.5 Bcf of working gas. The completed facility will be designed to allow cycling up to six times a year, with a peak injection rate of 135 MMcf per day. Maximum withdrawal capability will initially be 200 MMcf per day upon completion of the first two caverns in Phase 1, and will then increase to 400 MMcf per day after completion of Phase 2.

¹ *Unocal Keystone Gas Storage L.L.C.*, 100 FERC ¶ 61,310 (2002).

7. The first two caverns are proposed to become operational in 2008, with the third and fourth caverns expected to be completed approximately two years later.

2. Header System and Compression

8. The Windy Hill project will be located close to the interstate pipeline facilities of Cheyenne Plains Gas Pipeline Company, LLC (Cheyenne Plains) and Colorado Interstate Gas Company (CIG), and the intrastate pipeline system of Public Service Company of Colorado (PSCo). Windy Hill proposes to construct a 3.5-mile-long, 16-inch diameter lateral to connect to Cheyenne Plains and a 10.4-mile-long, 16-inch diameter lateral which will connect with both PSCo and CIG.

9. Windy Hill also proposes to construct a compressor station adjacent to the storage caverns. Three gas-fired compression units, each capable of generating 2,370 of horsepower, will be installed. This compression will be used to inject gas into storage and, as needed, to withdraw gas from storage for redelivery to the pipelines.

B. Rates and Services

10. Windy Hill requests a blanket certificate under subpart G of Part 284 in order to provide firm and interruptible storage services on an open-access basis. Windy Hill also requests approval of its pro forma tariff at Exhibit P to its application. Windy Hill proposes to provide the firm storage service under Rate Schedule FSS and the interruptible storage service under Rate Schedule ISS. The rate schedules are intended to allow Windy Hill's customers to customize their respective injection rates, withdrawal rates, and total inventory capacity based upon their needs.

11. Windy Hill also requests authority to charge market-based rates for all storage services offered under Rate Schedules FSS and ISS. Windy Hill supports its request with a market power analysis at Exhibit I to its application that concludes that Windy Hill will lack market power with respect to the services that it provides.

C. Need for the Project

12. Windy Hill states that, in addition to the well-documented growing need for natural gas in the United States,² there is also an increasing need for the type of high-deliverability gas storage that its salt caverns will provide. Windy Hill asserts that with

² *Annual Energy Outlook 2005 – With Projections to 2025*, Energy Information Administration (Jan. 2005).

its location near Colorado's Front Range, it can play a supporting role in the large and growing Rocky Mountain production region.

13. Windy Hill asserts that its proposed facility is particularly well suited to help meet the need for natural gas because deliverability from salt caverns is typically much higher than from storage facilities located in depleted reservoirs or aquifers. This allows multi-cycle service to be offered to those customers who wish to deplete and replenish their stored gas inventory frequently. Windy Hill asserts that the compression and control equipment at the Windy Hill facility will be designed for rapid turn around from injection to withdrawal to offer customers the greatest flexibility possible.

14. Windy Hill states that its first open season, held in early 2005, resulted in non-binding requests for service for a combined 7.5 Bcf of firm capacity. Windy Hill held a second open season in recognition of the receipt of bids for more capacity than available. Windy Hill is currently negotiating precedent agreements with interested shippers. Windy Hill anticipates that all Phase 1 capacity will be fully subscribed prior to its in-service date. Reflecting the high level of interest in the project, Windy Hill anticipates holding another open season for Phase 2 capacity closer to its in-service date.

D. Requests for Waivers

15. Because it proposes to charge market-based rates, Windy Hill requests waiver of certain of the Commission's filing, accounting, and reporting requirements applicable to cost-based rate proposals, which the Commission previously has found to be inapplicable to storage providers that are granted market-based rate authority.

16. Windy Hill also requests waiver of several additional Commission regulations and policies. Since Windy Hill is proposing to provide only natural gas storage service, and no stand-alone transportation services, Windy Hill requests waivers of the section 284.7(d) requirement pertaining to segmentation and the section 157.14(a)(10) requirement to provide a showing of accessible gas supplies. Windy Hill also requests a waiver of the electronic data interchange (EDI) standards established by the North American Energy Standards Board (NAESB). In addition, Windy Hill states that it is an independent storage provider that is exempt from the Commission's affiliate Standards of Conduct and, therefore, has not included specific provisions for compliance with those Standards of Conduct.

17. Further, Windy Hill seeks a waiver of the Commission's "shipper must have title" policy to enable it to obtain off-system capacity that may be necessary to provide the storage services to its customers. In support of its request, Windy Hill proposes tariff language stating that Windy Hill will provide transportation service using such off-system capacity only pursuant to its open-access tariff.

18. Finally, Windy Hill requests that the Commission expressly permit Windy Hill, as part of the market-based rates negotiation process, to negotiate with its customers whether they will be provided with a right of first refusal (ROFR).

III. Notice, Interventions, and Comments

19. Public notice of Windy Hill's application was published in the *Federal Register* on November 17, 2005, 70 *Fed. Reg.* 69,751. Motions to intervene were due on or before November 30, 2005. The City of Brush!, PSCo, Enstor Operating Company, LLC (Enstor), Cheyenne Plains, CIG, and Western Gas Resources, Inc. filed timely, unopposed motions to intervene. Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.³

20. No protests were filed. However, several intervenors included comments with their intervention requests. The City of Brush! raises environmental and security concerns which are addressed below. The PSCo notes that, while it is not opposed to an interconnection with Windy Hill, any interconnection agreement will be subject to the operational parameters of PSCo's system at the point of interconnection, as well as other considerations including, but not limited to, any approvals that PSCo might require from the Colorado Public Utilities Commission. Enstor expresses support for Windy Hill's request for market-based rate authorization, and requests that the Commission grant market-based rate authorization under Section 312 of the Energy Policy Act of 2005, in the event the Commission concludes that Windy Hill does not pass the Commission's existing market power test.

IV. Discussion

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

³ See 18 C.F.R. § 385.214(a)(3)(2005).

A. The Certificate Policy Statement

22. The Commission's September 15, 1999 Certificate Policy Statement provides guidance as to how it will evaluate proposals for certificating new construction.⁴ 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 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.

23. 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.

24. 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. Windy Hill is a new entrant in the natural gas storage market and has no existing customers. Therefore, there will be no subsidization. Moreover, under its market-based rate proposal, Windy Hill assumes the economic risks associated with the costs of the project's facilities to the extent that any capacity is unsubscribed. Thus, the Commission finds that Windy Hill has satisfied the threshold requirement of the Certificate Policy Statement.

⁴*Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order on clarification*, 90 FERC ¶ 61,128, *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

25. Windy Hill's storage project should not have any adverse impact on existing pipelines or their customers. Rather, it should enhance competition in the region by providing additional storage service at market-based rates. Windy Hill's market power analysis, at Exhibit I to its application, indicates that the proposed storage facility will be located in a narrowly defined market area that has experienced steady growth in gas use. Windy Hill will be one of a number of storage facilities in the region. Further, Windy Hill will be interconnecting with at least three different pipeline systems, which should provide added flexibility to the customers holding capacity on these pipelines. Additionally, no storage company in Windy Hill's market area has protested Windy Hill's application.

26. There should be minimal adverse impact on landowners associated with the creation of these storage caverns. Windy Hill has obtained all surface and mineral rights for the 1,280 acres that its storage project will encompass, eliminating the need for Windy Hill to exercise eminent domain rights. Windy Hill has also acquired the necessary rights-of-way for its lateral pipeline to connect to Cheyenne Plains, and is in negotiations to acquire the rights-of-way for its other pipeline facilities. Windy Hill states that only five landowners are involved in that process and, therefore, does not expect it will need to resort to condemnation. Further, no landowner or community member has objected to the project. For these reasons, we find that any adverse impacts on landowners and communities will be minimal.

27. In addition, while Windy Hill had no precedent agreements or executed contracts at the time it filed its application, Windy Hill states that its open season resulted in non-binding bids with terms of five to ten years for a combined 7.5 Bcf of firm capacity -- more than all of the Phase 1 capacity that will be operationally available. Windy Hill further states that it expects that all Phase 1 capacity will be fully subscribed prior to the Phase 1 in-service date.⁵ Windy Hill indicates that it expects the demand for additional natural gas storage facilities in the Rocky Mountain region to increase due to overall natural gas demand growth projections of 1.5 percent annually, the need for gas production from the Rocky Mountain region to help satisfy the increasing demand for natural gas, the need for an additional 35 Bcf of gas storage capacity annually to meet the projections of incremental demand for natural gas storage in North America reaching 700 Bcf by 2025, and the planned construction of additional pipeline infrastructure in the Rocky Mountain region.⁶

⁵ Application of Windy Hill at 7 and 17-18.

⁶ *Id.* at 14-16.

28. The Commission concludes that the Windy Hill facility will enhance the development of an efficient interstate pipeline transportation system by providing customers access to additional high-deliverability storage capacity. Based on the benefits the Windy Hill project will provide to the market and the lack of any identified adverse effect on existing customers, other pipelines, landowners, or communities, we find, consistent with the Certificate Policy Statement and section 7 of the NGA, that the public convenience and necessity requires approval of Windy Hill's storage project.

B. Market-Based Rates

29. Under the Alternative Rate Policy Statement,⁷ the Commission's framework for evaluating requests for market-based rates has two principal purposes: (1) to determine whether the applicant can withhold or restrict services and, as a result, increase price by a significant amount for a significant period of time, and (2) to determine whether the applicant can discriminate unduly in price or terms and conditions. To find that an applicant cannot withhold or restrict services, significantly increase prices over an extended period, or unduly discriminate, the Commission must find either that there is a lack of market power⁸ because customers have good alternatives,⁹ or that the applicant or the Commission can mitigate the market power with specified conditions. The Commission's analysis of whether an applicant has the ability to exercise market power includes three major steps: (1) definition of the relevant markets; (2) measurement of a firm's market share and market concentration; and (3) evaluation of other relevant factors.

30. Windy Hill's market power analysis for the storage market defines the relevant product and geographic markets, measures market share and concentration, and evaluates the ease of entry into the relevant market. Windy Hill identifies the relevant product market as interruptible and firm natural gas storage services. Windy Hill identifies the

⁷*Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines*, 74 FERC ¶ 61,076, *reh'g denied*, 75 FERC ¶ 61,024 (1996), *petitions for review denied sub nom.*, *Burlington Resources Oil & Gas Co. v. FERC*, 172 F.3d 918 (D.C. Cir. 1998) (Alternative Rate Policy Statement).

⁸ Market power is defined as the ability to profitably maintain prices above competitive levels for a significant period of time. 74 FERC ¶ 61,076 at 61,230.

⁹ A good alternative is an alternative that is available soon enough, has a price that is low enough, and has a quality high enough to permit customers to substitute the alternative for an applicant's service. *Id.* at 61,231.

relevant geographic market as storage facilities that are connected to or directly accessible to the pipelines and hubs south and north of Windy Hill.¹⁰ The geographic market used in Windy Hill's analysis consists of 36 other storage facilities located in Wyoming, Colorado, Kansas, Oklahoma, and southwestern Nebraska.¹¹ These 36 other storage facilities in the relevant market are owned by ten different corporate owners.

31. Windy Hill utilizes two measures of natural gas storage capacity in its analysis of market concentration: working gas capacity and peak day deliverability. Windy Hill's market power analysis shows a Herfindahl Hirschman Index (HHI)¹² of market concentration for working gas capacity of 1311 with Windy Hill's market share being 1.9 percent. Windy Hill's HHI for peak day deliverability is 1491 with Windy Hill's market share being 6.3 percent. Windy Hill argues that, as a small, new entrant in an already unconcentrated market,¹³ it will not possess market power.

32. Windy Hill's market power analysis also contends that Windy Hill does not possess market power because the relevant market is easy to enter. Windy Hill argues that the relevant market has numerous depleted fields which give a new storage provider the ability to easily enter the market and interconnect with existing or new pipeline facilities. In addition, Windy Hill identifies three storage projects in the relevant market

¹⁰ These hubs include the Cheyenne Hub (north of Windy Hill on Cheyenne Plains) and Greensburg Hub (south of Windy Hill on Cheyenne Plains).

¹¹ The storage facilities included in the geographic market are directly connected to CIG, Southern Star Central Gas Pipeline Inc., Cheyenne Plains, ONEOK Inc.'s MidContinent Market Center, Panhandle Eastern Pipe Line Co., Williston Basin Interstate Pipeline Co., or Northern Natural Gas Co.

¹² An HHI is calculated by summing the squares of each storage seller's market share. The Alternative Rate Policy Statement specifies that the HHI is to be used as an indicator of the level of scrutiny to be given to the applicant. An HHI above 1,800 results in the applicant being given closer scrutiny because the HHI indicates that the market is more concentrated and the applicant may have significant market power. Alternative Rate Policy Statement at 61,235.

¹³ Windy Hills' market power analysis shows the relevant market to have an HHI of 1358 for working gas capacity and 1652 for peak day deliverability prior to Windy Hill's entry.

that are in various stages of development. Finally, Windy Hill contends that incremental pipeline expansions, along with liquefied natural gas and propane-air facilities, provide customers with additional alternatives to Windy Hill.

33. In prior orders, we have approved requests to charge market-based rates for storage services based on a finding that a proposed project would not be able to exercise market power due to its small size, its anticipated small share of the market, and the existence of numerous competitors.¹⁴ We have also distinguished between production area storage facilities and market area storage.¹⁵ In general, market power in a production area is less of a concern due to the numerous alternative storage facilities operating in competition with one another.

34. We find that Windy Hill's proposed market definition properly identifies good alternatives to Windy Hill. We also find that, within this relevant market, Windy Hill's prospective market shares are low and that the market's concentration is below the threshold for closer scrutiny. Finally, we agree that barriers to entry are likely to be low in the relevant market. Thus, we conclude that Windy Hill will lack significant market power. Further, Windy Hill's proposal for market-based rates is unopposed. For these reasons, we will approve Windy Hill's request to charge market-based rates for firm and interruptible storage services.

35. In addition to other reporting requirements directed herein, Windy Hill must notify the Commission if future changes in circumstance significantly affect its present market power status. Thus, our approval of market-based rates is subject to reexamination in the event that: (a) Windy Hill seeks to add storage capacity beyond the capacity authorized in this proceeding; (b) an affiliate increases storage capacity; (c) an affiliate links storage facilities to Windy Hill; or (d) Windy Hill, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to Windy Hill. Since these circumstances could affect its market power status, Windy Hill shall notify the Commission within 10 days of acquiring knowledge of any such changes. The notification shall include a detailed description of the new facilities and their relationship to Windy Hill.¹⁶ Windy

¹⁴ *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002); *Egan Hub Partners, L.P.*, 95 FERC ¶ 61,395 (2001); *Moss Bluff Hub Partners, L.P.*, 80 FERC ¶ 61,181 (1997); *Egan Hub Partners, L.P.*, 77 FERC ¶ 61,016 (1996).

¹⁵ *Steuben Gas Storage Company*, 72 FERC ¶ 61,102 (1995), *order on compliance filing, issuing certificates, and denying reh'g*, 74 FERC ¶ 61,024 (1996).

¹⁶ *See Copiah County Storage Company*, 99 FERC ¶ 61,316 (2002); *Egan Hub*, 99 FERC ¶ 61,269 (2002).

Hill is also directed to file an updated market power analysis within five years of the date of this order and every five years thereafter. The Commission also reserves the right to require such an analysis at any intervening time.¹⁷

C. Waivers of Filing, Reporting, and Accounting Requirements

36. In light of its request for authority to charge market-based rates and the fact that Windy Hill has no pre-existing facilities, Windy Hill requests that the Commission waive the requirement of section 157.6(b)(8) (3) of the Commission's regulations to file cost-based data, as well as the filing requirements of section 157.14(a)(13), (14), (16), and (17) to submit Exhibits K (Cost of Facilities), Exhibit L (Financing), Exhibit N (Revenues, Expenses, and Income), and Exhibit O (Depreciation and Depletion), since these exhibits also support cost-based rate authority. For the same reasons, Windy Hill requests waiver of the accounting and annual reporting requirements under Part 201 and sections 260.1 and 260.2, respectively, of the Commission's regulations. Similarly, Windy Hill requests waiver of the requirement for reservation charges and the straight fixed-variable rate design set forth in sections 284.7(e) and 284.10 also as being inapplicable to market-based rate design. Finally, Windy Hill requests waiver of the filing requirement of section 157.14(a)(10) to submit total gas supply data (Exhibit H), as being inapplicable to natural gas storage operations.

37. The cost-related information required by these regulations is not relevant in light of our approval of market-based rates for Windy Hill's storage services. Thus, consistent with our findings in previous orders,¹⁸ we will grant Windy Hill's request for waivers of the regulations requiring the filing of cost-based information, reservation charges, and the use of a straight fixed variable rate design. We will also grant a waiver of section 157.14(a)(10) requiring an applicant to submit gas supply data, which does not pertain to natural gas storage service.

¹⁷ See *Liberty Gas Storage LLC*, 113 FERC ¶ 61,247 at P 51 (2005) and *Rendezvous Gas Services, L.L.C.*, 112 FERC ¶ 61,141 at P 40 (2005).

¹⁸ See *SG Resources Mississippi, L.L.C.*, 101 FERC ¶ 61,029 at P 26 (2004); *Egan Hub Partners, L.P.*, 95 FERC ¶ 61,395 at p. 62,473 (2001).

38. In addition, the Commission grants the requested waiver of the requirement to file an annual report (Form No.2-A) in section 260.2 of the regulations,¹⁹ except for the information necessary for the Commission's assessment of annual charges. Windy Hill is required to file pages 520 and 520a of Form No. 2-A, reporting the gas volume information which is the basis for imposing an Annual Charge Adjustment (ACA) charge.²⁰

D. Tariff Issues

39. Windy Hill proposes to offer firm and interruptible storage services on an open-access basis under the terms and conditions set forth in the pro forma tariff attached as Exhibit P to the application. We find that Windy Hill's proposed tariff generally complies with Part 284 of the regulations, with the exceptions discussed below.

1. Segmentation

40. Section 284.7(d) of the Commission's regulations provides that an interstate pipeline must permit a shipper to make use of the firm capacity for which the shipper has contracted by segmenting that capacity into separate parts for the shipper's own use, or for the purpose of releasing that capacity to replacement shippers to the extent that segmentation is operationally feasible. Windy Hill requests a waiver of the Order No. 637 segmentation requirement in section 284.7(d), contending that its system consists of a single, stand-alone storage facility, making segmentation infeasible.

41. In *Clear Creek Gas Storage Company*,²¹ we found that the requirements of section 284.7(d) do not apply to pipelines engaged solely in natural gas storage and which do not provide stand-alone transportation services. Windy Hill meets the requirements in *Clear Creek*. Thus, we hold that the requirements of section 284.7(d) do not apply to Windy Hill. Other tariff provisions related to segmentation, such as the allocation of primary point rights in segmented release and within-the-path scheduling, also do not apply to Windy Hill.

¹⁹ However, we will require Windy Hill to maintain sufficient records of cost and revenue data consistent with the Uniform System of Accounts should the Commission require Windy Hill to produce this information in the future.

²⁰ See *Wyckoff Gas Storage Co., LLC*, 105 FERC ¶ 61,027 at P 65 (2003).

²¹ 96 FERC ¶ 61,071 (2001) (*Clear Creek*).

2. **Acquisition of Off-System Capacity and Waiver of Shipper Must Have Title Policy**

42. Windy Hill requests a generic waiver of the “shipper must have title” policy for any off-system capacity it may need to acquire in order to provide storage services, to enable it to use that capacity to transport natural gas owned by other parties. Section 21 of Windy Hill’s pro forma tariff provides:

Windy Hill may, from time to time, acquire transportation and/or storage capacity on a third-party pipeline system. Windy Hill states that it will only provide transportation and storage Services for others using such capacity pursuant to its open access FERC Gas Tariff and the “shipper must have title” policy is waived to permit such use.²²

43. This language implements the Commission's policy with respect to pipelines' acquisition of off-system capacity. In *Texas Eastern Transmission Corporation (TETCO)*,²³ the Commission found that pipelines no longer need to obtain prior approval to acquire capacity on another pipeline, provided the acquiring pipeline has filed tariff language specifying that it will only transport for others using off-system capacity pursuant to its existing tariff and rates. Windy Hill’s proposed tariff language is consistent with the requirements set forth in *TETCO* and authorizations granted other storage companies authorized to charge market-based rates.²⁴

44. Therefore, we accept Windy Hill’s proposed tariff language and grant waiver of the shipper must have title policy, with the following clarifications, however. Because Windy Hill has proposed only to offer storage services, and has proposed no rates or tariff provisions relating to any other transportation services other than storage, Windy Hill may only use capacity obtained on other pipelines pursuant to the *TETCO* waiver in order to move gas into and out of storage. That is, Windy Hill may not use its header facilities and capacity on other pipelines to transport gas which will not physically or contractually enter its storage facility unless and until it has received Commission authorization to provide such transportation services. Furthermore, Windy Hill’s

²² Pro Forma Sheet No. 68.

²³ 93 FERC ¶ 61,273 (2000), *reh’g denied*, 94 FERC ¶ 61,139 (2001).

²⁴ *See, e.g., SG Resources Mississippi, L.L.C.*, 101 FERC ¶ 61,029 at P 30-33 (2002).

authorized use of the *TETCO* waiver to provide storage service shall be limited to the geographic area covered by Windy Hill's market study.

45. In order to ensure that Windy Hill uses acquired off-system capacity in a manner consistent with its market-based rate authority and tariff provisions, and in order to satisfy our responsibility to monitor and prevent the exercise of market power, we direct Windy Hill, once it becomes operational, to make an annual informational filing on its provision of service using off-system capacity, as detailed below.²⁵

46. Within 30 days after its first full year of operation, and every year thereafter, Windy Hill is directed to file, for each acquisition of off-system capacity:

- a. the name of the off-system provider;
- b. the type, level, term and rate of service contracted for by Windy Hill;
- c. a description of the geographic location – boundaries, receipt and delivery points, and segments comprising the capacity;
- d. the operational purpose(s) for which the capacity is utilized;
- e. a description of how the capacity is associated with specific transactions involving customers of Windy Hill; and
- f. an identification of total volumes, by Windy Hill's rate schedule and customer, that Windy Hills has nominated on each off-system provider during the reporting period.

3. Implementation of NAESB Standards

47. The Commission has adopted in Part 284 of its regulations various standards for conducting business practices and electronic communication with interstate pipelines as promulgated by the North American Energy Standards Board (NAESB).²⁶ These standards govern nominations, allocations, balancing measurement, invoicing, capacity release, and mechanisms for electronic communication between pipelines and those with whom they do business. Windy Hill states that its pro forma tariff is consistent with Order Nos. 636 and 637, and with Version 1.7 of the NAESB Standards,²⁷ the latest

²⁵ See, e.g., *Starks Gas Storage L.L.C.*, 111 FERC ¶ 61,105 at Ps 54-57 (2005).

²⁶ NAESB was formerly called the Gas Industry Standards Board (GISB).

²⁷ In Section 15 of the General Terms and Conditions of its pro forma tariff sheets, Windy Hill adopts Version 1.7 of the NAESB standards. See Pro Forma Sheet No. 60.

version of the standards adopted by the Commission at the time Windy Hill filed its certificate application.²⁸

48. However, Windy Hill requests a partial waiver of section 284.12(a)(1)(iv) of the Commission's regulations which require interstate pipelines to comply with the electronic data interchange (EDI) standards established by NAESB. Windy Hill states that it will operate an interactive website that will provide for an electronic delivery mechanism (EDM) in conformity with the Commission and NAESB standards, but proposes not to implement the EDI standards. Windy Hill states that it anticipates having only a small number of customers and that those customers would not require EDI. Therefore, Windy Hill requests that the Commission grant it an exemption from the EDI standards until 90 days following a request from one of its customers that it implement EDI. Consistent with Commission precedent, we will grant Windy Hill's request for an exemption of the EDI standards, but will require Windy Hill to implement those standards within 90 days following the receipt of such a request.²⁹

4. Right of First Refusal

49. Windy Hill seeks Commission authorization to allow it to negotiate with its customers, on a not unduly discriminatory basis, whether they will be provided with a Right of First Refusal (ROFR) under Rate Schedule FSS. Windy Hill states that, because it proposes to charge market-based rates, none of its customers will pay maximum rates and, therefore, the requirement of a "regulatory ROFR" does not apply.³⁰ Windy Hill asserts that the Commission has held that pipelines and their customers may agree on "contractual ROFRs" in circumstances where a ROFR is not required by regulation.³¹

²⁸ See *Standards for Business Practices of Interstate Natural Gas Pipelines*, Order No. 587-S, *FERC Stats. & Regs.* ¶ 31,179 (2005).

²⁹ See *Rendezvous Gas Services, L.L.C.*, 112 FERC ¶ 61,141 (2005), *Saltville Gas Storage Co. LLC*, 109 FERC ¶ 61,200 (2004); *Missouri Interstate Gas, LLC*, 102 FERC ¶ 61,172 (2003).

³⁰ Windy Hill cites section 284.221(d)(2) of the Commission's regulations which requires a ROFR for customers paying maximum rates for a term of one year or more.

³¹ Windy Hill cites *Texas Eastern Transmission, LP*, 109 FERC ¶ 61,145 (2004); *Great Lakes Gas Transmission L.P.*, 99 FERC ¶ 61,242 (2002).

Windy Hill thus requests that it be permitted to negotiate with its customers whether to include a ROFR as part of the negotiation process involved in market-based rates.³²

50. Section 6 of Rate Schedule FSS includes Windy Hill's proposed ROFR provisions.³³ The Commission will accept Windy Hill's proposal to negotiate ROFR provisions with its customers, subject to the following condition. Windy Hill is directed to file revised tariff sheets to modify section 6 of Rate Schedule FSS to indicate that Windy Hill will negotiate ROFR provisions with its customers on a not unduly discriminatory basis.

E. Engineering Analysis

51. The proposed salt cavern site lies in a geological formation known as the Permian Salt. This formation is a 370-foot interval consisting of interbedded salt, anhydrite, and shale. The storage interval consists of approximately 60 feet of the Chugwater Anhydrite as the caprock, 143 feet of the Upper Salt, 50 feet of the Opeche Shale, and 178 feet of the Lower Salt. The Opeche Shale consists of an upper and lower shale unit with a 16-foot-thick sandstone layer in the middle. The Opeche sandstone is very fine-grained, and has a porosity ranging between 1-10 percent and a permeability of less than 0.034 millidarcies (md). The potential for migration of gas from the caverns through the Opeche shale is minimal as Windy Hill states no leak off was observed during the formation integrity testing of Well 1-17 D. There is no documented subsidence in Morgan County. Windy Hill states that all model scenarios demonstrated cavern stability and minimal subsidence, less than 8 inches over 50 years.

52. Four caverns will be constructed, and four new injection/withdrawal/mining wells will be drilled. These wells are 4-17 S, 5-17 S, 6-17 S, and 7-17 S, and will be drilled to approximately 6,130 feet. Each cavern will be solution-mined from a single wellbore. Insoluble material is expected to take up approximately 25 percent of the cavern space, and the open space dimensions of the caverns will be approximately 226 by 260 feet.

³² Citing *Caledonia Energy Partners, LLC*, 111 FERC ¶ 61,095 (2005), Windy Hill states that it appears that the Commission has begun to accept this concept. In that case, the pro forma tariff provided for a ROFR for customers with contract terms of three years or more. Windy Hill maintains that allowing storage providers to provide a contractual ROFR as a marketing decision, on a case-by-case basis, is the logical next step, and asks the Commission to confirm its application of ROFR policies to market-based storage projects.

³³ Pro Forma Sheet Nos. 8-10.

Each cavern will have a total capacity of approximately 2.39 Bcf, with a working gas capacity of 1.5 Bcf. The distance between each cavern ranges from 1,041 feet to 1,320 feet. Once all four caverns are constructed, the facility will have a total capacity of 9.56 Bcf, with a working gas capacity of 6.0 Bcf. The maximum peak deliverability will be 400 MMcf per day, and the injection rate will be 135 MMcf per day. The facility will be able to cycle up to 6 times per year, with 44 days for injection, and 15 days for withdrawal. Windy Hill proposes a maximum operating pressure gradient for each salt cavern of 0.75 psi/ft and a minimum pressure of 0.25 psi/ft. These pressure limitations are necessary to minimize the creep behavior of the salt. Based on those gradients, the maximum bottomhole pressure of the caverns is 4,530 psia.

53. Windy Hill states that each mining well will be tested for mechanical integrity prior to commencing continuous mining and after mining is complete. The caverns will be tested prior to being converted to gas storage using the industry standard nitrogen/brine interface test.

54. Water for the mining of the caverns will be supplied from four new water supply wells (1-18 WSW, 2-18 WSW, 3-18 WSW, and 4-18 WSW). Water will be withdrawn from the J-4 sandstone, at a depth of approximately 5,200 feet. Brine will be disposed by injection into the J-4 Sandstone, at a depth of approximately 5,200 feet, and at a distance of approximately 9,100 feet from the supply wells. There will be one existing disposal well, 1-17 D, and three new disposal wells, 2-17 D, 3-17 D, and 4-17 D, with 4-17 D only constructed if needed. Windy Hill will also construct six groundwater monitoring wells to depths ranging between 70 and 100 feet.

55. The proposed cavern locations are well within the design criteria and confinement of the salt formation and the caverns are located at sufficient depth and within proper boundaries. The proposed cavern arrangement and spacing follow the Interstate Oil and Gas Compact Commission (IOGCC)³⁴ guidelines for salt cavern storage facilities and should prevent pressure influences between caverns when they are operated at full storage capacity or pressure. The wells are designed properly and the various test and logs to be run on these caverns and wells are appropriate. Finally, the maximum and

³⁴ 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 "I.O.G.C.C. 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.

minimum cavern pressure gradients throughout the storage cycle have been chosen to preserve the structural integrity of the caverns. Based on our review, we conclude that the proposed salt cavern storage facility, if constructed as described, is technically sound and well defined. Windy Hill, however, must comply with the engineering conditions attached in Appendix A to this order.

F. Environmental Analysis

56. On November 18, 2005, we issued a Notice of Intent to Prepare an Environmental Assessment for the Proposed Windy Hill Gas Storage Project and Request for Comments on Environmental Issues (NOI). We received responses to the NOI from the Colorado Historical Society's State Historic Preservation Officer, and the Colorado Division of Water Resources, in addition to the City of Brush!, Colorado's notice of intervention raising environmental issues.

57. An environmental assessment (EA) was prepared for Windy Hill's proposal. The EA addresses geology, soils, water resources, fisheries, wetlands, vegetation and wildlife, threatened and endangered species, cultural resources, land use and recreation, air quality and noise, and alternatives. Our staff addressed all substantive comments in the EA, as described below.

58. The City of Brush! expresses concerns about the possibility of contamination of its shallow water well field by project activities, conflicts with current and future piping and hardware to the well field, revegetation along the pipeline route, and its obligation under new federal statutes to address the threat of terrorist attack on the pipeline and its potential impact on the City of Brush!'s water system.

59. The City of Brush! operates a municipal well field 350 feet south of the pipeline right-of-way near MP 7.0, which supplies pristine, untreated water to approximately 5,000 residents. The City of Brush! is concerned that the well field is susceptible to potential contamination because of the highly permeable dune sand that covers the surface, and that a spill could reach the water table quickly. Windy Hill proposes to implement a Spill Prevention Control and Countermeasure (SPCC) plan prior to construction to minimize the risk of groundwater contamination and avoid potential impacts to the City of Brush! well field.³⁵ Windy Hill also proposes to take additional

³⁵ Application of Windy Hill, Resource Report 2, Section 2.1.2.

precautions to proactively protect the well field, such as prohibiting the overnight parking of equipment and requiring the collection and disposal of construction trash and certain materials.³⁶

60. As the EA concludes, the SPCC plan, the proposed special precautions, and the 350-foot offset north of the City of Brush! well field, which is in the downgradient direction, will adequately protect the well fields.³⁷ In addition, the City of Brush! and Windy Hill are presently negotiating a Right-of-Way and Easement Agreement (Easement Agreement) that will contain provisions for protection of the City of Brush!'s well field.³⁸ In particular, as the EA notes, in the event that the ground surface in the City of Brush!'s well-field or the Source Water Assessment is contaminated by hydrocarbon or other contaminants during any of Windy Hill's project-related activities, the Easement Agreement would specify, among other things, that Windy Hill will be responsible for: (1) immediately notifying the City of Brush!; (2) the full costs of replacing any of the City of Brush!'s producing or monitoring wells; and (3) performing all remediation operations to remove the contaminant and restore the damaged area, including soils and the aquifer, to its prior condition.³⁹

61. Regarding the City of Brush!'s concerns about current and future piping and hardware within its well field, the Easement Agreement between Windy Hill and the City of Brush! will also require that Windy Hill coordinate its construction activities with the City of Brush! prior to construction.⁴⁰ As the EA points out, the City of Brush! will require a three-foot minimum separation between Windy Hill's pipeline and the City of Brush!'s water mains in its well field.

62. With respect to the City of Brush!'s concern regarding revegetation along the pipeline route, the EA sets forth the mitigation measures Windy Hill proposes to help minimize project-related impacts on vegetation.⁴¹ Specifically, areas of temporary

³⁶ *Id.* at p. 2-14.

³⁷ EA, Section 2.3.1.5.

³⁸ EA, Section 2.6.1.2. Some these provisions are summarized in Section 2.3.1.5 of the EA.

³⁹ EA, Section 2.6.1.2.

⁴⁰ *Id.*

⁴¹ EA, Section 2.4.1.2.

disturbance will be revegetated as quickly as possible following construction with a seed mix containing the dominant native species currently found in the project area, standard best management practices will be implemented to minimize erosion, and within the Source Water Assessment, on City of Brush! land, the reseeded area would be monitored for a period of five years after reseeded, at least one time annually in the spring of each year. These measures adequately address the City of Brush!'s concerns regarding vegetation.

63. Section 2.8 of the EA addresses in detail the City of Brush!'s concern about a potential terrorist attack on the pipeline affecting the City of Brush!'s water supply. As explained in the EA, the transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. However, the pipeline and aboveground facilities associated with Windy Hill's project must be designed, constructed, operated, and maintained in accordance with the Department of Transportation's Minimum Federal Safety Standards for natural gas pipelines,⁴² including the provisions for written emergency plans, emergency shutdowns, and appropriate training to local emergency service personnel before the facilities are placed in service.

64. Recognizing the importance of safety and security in any Commission action, we find that Windy Hill's proposed project represents a minimal increase in risk to the public and are confident that with the options available in the detailed design of Windy Hill's facilities, they will be constructed and operated safely.⁴³ We further conclude that due to the paucity of liquids within the pipeline and the depth of the drinking water aquifer, any rupture of the pipeline, be it accidental or deliberate, should not result in any irreparable contamination or usage restriction for the City of Brush!'s water supply.⁴⁴

65. The Colorado Division of Water Resources (CDWR) references Windy Hill's proposal to construct and utilize four water supply wells and six ground water monitoring wells, and advises that well permits must be obtained prior to the construction of any new wells or before a change of use of any existing well. In addition, the CDWR is concerned that the withdrawal and use of tributary ground water within the South Platte River Basin may result in depletions to the stream system and injury to senior water rights.

⁴² 49 C.R.R. Part 192.

⁴³ EA, Section 2.8.

⁴⁴ *Id.*

66. As stated in the EA, the four water supply wells and six monitoring wells would be permitted through the Colorado State Engineer's Office in accordance with 2 Colorado Code of Regulations (CCR) 402-2 Rule 10, Minimum Construction Standards for Water Wells, and Rule 14, Minimum Construction Standards for Monitoring and Observation Wells/Holes and Test Holes, respectively.⁴⁵ Further, as pointed out in the EA, there should be no need for concern about depletions in the stream systems and damage to senior water rights, since the wells would withdraw water from an approximately depth of 5,200 feet below ground surface.⁴⁶

67. Finally, the Colorado Historical Society's State Historic Preservation Officer (SHPO) recommends that we coordinate our cultural resources studies with the studies required under section 106 of the National Historic Preservation Act. Environmental Condition 11 to this order requires, as recommended by the EA,⁴⁷ that Windy Hill file with the Secretary of the Commission cultural resource survey and evaluation reports, any necessary treatment plans and the Colorado SHPO's comments before implementation of any treatment plans/mitigation measures or commencement of construction.⁴⁸

68. Based upon the analysis in the EA, we conclude that if the project is constructed in accordance with Windy Hill's application and supplements filed January 3, 12, and 31, 2006, February 15, 2006, and March 2 and 10, 2006, and if Windy Hill complies with all environmental conditions detailed in Appendix B of this order, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

69. 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

⁴⁵ EA, Section 1.6.1.2.

⁴⁶ EA, Section 1.7.

⁴⁷ EA, Section 2.5.

⁴⁸ Appendix B, Environmental Condition 11.

local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.⁴⁹

70. Windy Hill 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 Windy Hill. Windy Hill shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

G. Blanket Certificates

71. Windy Hill requests issuance of a Part 284, subpart G, blanket certificate in order to provide open-access storage services. Under a Part 284 blanket certificate, Windy Hill will not require individual authorizations to provide storage services to particular customers. Windy Hill filed a pro forma Part 284 tariff to provide open-access storage services. Since a Part 284 blanket certificate is required for Windy Hill to offer these services, we will grant Windy Hill a Part 284 blanket certificate, subject to the conditions imposed herein.

72. We will also grant Windy Hill a Part 157, subpart F blanket certificate. The subpart F blanket certificate gives a natural gas company section 7 authority to automatically, or after prior notice, perform certain eligible activities related to the construction, acquisition, replacement and operation of pipeline facilities. However, Windy Hill's Part 157, subpart F blanket certificate will be conditioned so that Windy Hill cannot rely on the provisions of section 157.214 of the Commission's regulations to increase storage capacity. This restriction on Windy Hill's Part 157 blanket certificate is based on the fact that Windy Hill's storage cavern is a salt cavern in the initial stages of development for which future expansion will require reevaluation by the Commission of historical data and new engineering and geological data.

⁴⁹ 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).

H. Conclusion

73. For the reasons set forth herein we find, subject to the conditions below, that the public convenience and necessity requires issuance of a certificate under section 7 of the NGA for Windy Hill's proposed facilities. Thus we grant the requested authorizations to Windy Hill.

74. 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 Windy Hill in Docket No. CP06-19-000 authorizing it to construct and operate the described storage project, as described and conditioned herein, and as more fully described in the application.

(B) Windy Hill's request for a Part 284, subpart G blanket certificate in Docket No. CP06-21-000 is granted. Windy Hill's request for a Part 157, subpart F blanket certificate in Docket No. CP06-20-000 is granted, subject to the condition that Windy Hill may not rely on the provisions of section 157.214 of the Commission's regulations to increase storage capacity.

(C) The certificate issued in Ordering Paragraph (A) is conditioned upon Windy Hill's compliance with all applicable Commission regulations under the Natural Gas Act, particularly the terms and conditions 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.

(D) 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 four years of the date of the final order in this proceeding.

(E) Windy Hill's request to charge market-based storage rates for firm and interruptible storage service is approved, as discussed and subject to the conditions in this order.

(F) Windy Hill shall notify the Commission within 10 days of acquiring knowledge of: (a) Windy Hill's adding storage capacity beyond the capacity authorized in this order; (b) an affiliate's increasing storage capacity; (c) an affiliate's linking storage facilities to Windy Hill; (d) Windy Hill's or an affiliate's acquisition of an interest in, or being acquired by, an interstate pipeline connected to Windy Hill. The notification shall include a detailed description of the new facilities and their relationship to Windy Hill. Windy Hill is also directed to file an updated market power analysis within five years of the date of this order and every five years thereafter. The Commission reserves the right to require such an analysis at any intervening time.

(G) The Commission confirms that Windy Hill may negotiate right of first refusal provisions with its customers as part of the market-based rates negotiation process.

(H) Waiver is granted of the Commission's regulations that have been deemed inapplicable to storage providers with market-based rates, as discussed in this order.

(I) Waiver is granted of the Commission's "shipper must have title" policy, subject to the conditions discussed in the body of this order.

(J) Within 30 days after its first full year of operation, and every year thereafter, Windy Hill is directed to file an annual informational filing on its provision of service using off-system capacity, as detailed in this order.

(K) Waiver is granted of section 284.12(a)(1)(iv) of the Commission's regulations to exempt Windy Hill from compliance with the electronic data interchange (EDI) standards established by NAESB, subject to the conditions discussed herein.

(L) Windy Hill must submit actual tariff sheets that comply with the requirements contained in the body of this order within 60 days of the issuance of this order.

(M) Windy Hill must comply with the engineering conditions stated in Appendix A of this order.

(N) Windy Hill must comply with the environmental conditions stated in Appendix B of this order.

(O) Windy Hill 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 Windy Hill. Windy Hill shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

By the Commission.

(S E A L)

Magalie R. Salas,
Secretary

APPENDIX A
Unocal Windy Hill Gas Storage LLC
Engineering Conditions

This authorization includes the following condition(s):

1. Windy Hill shall establish and maintain a subsidence monitoring network over the proposed caverns storage area.
2. Windy Hill shall assemble, test and maintain an emergency shutdown system.
3. Windy Hill shall periodically log each cavern's well to check the cavern roof, top of the rubble pile, and casing status.
4. Windy Hill shall conduct sonar surveys of the caverns every five years to:
(a) monitor their dimensions and shape, and (b) estimate pillar thickness between caverns throughout the storage operations.
5. Windy Hill shall conduct an annual inventory verification study on each cavern.
6. Windy Hill shall determine and report to the Secretary of the Commission the final gas storage capacity of each cavern (including data and work papers to support the actual operating capacity determination).
7. The following conditions shall apply to the storage caverns:
 - a. The total maximum gas storage inventory stored in the caverns shall not exceed 9.56 Bcf at 14.73 psia and 60°F (each individual cavern shall not exceed 2,390 MMcf) without prior Commission authorization.
 - b. The maximum gas storage shut-in stabilized pressure in each cavern shall not exceed 0.75 psi per foot of cavern depth and the minimum pressure in each cavern shall be limited to 0.25 psi per foot of the cavern depth.
8. Before commencing gas storage operations in any of the caverns, Windy Hill shall file with Secretary of the Commission:
 - a. the results of the Mechanical Integrity Test (MIT) for each cavern before conversion of that cavern to natural gas storage;

- b. The results of sonar surveys of each cavern, including plan view and cross-sections;
 - c. copies of the latest interference, tracer surveys, or other testing or analysis, to verify the lack of communication between the caverns;
 - d. the volume of rubble at the base of each cavern, including the methodology for determining such volume; and
 - e. geological cross sections (when additional data is obtained) through the total project area showing all geologic units;
9. Windy Hill shall file semiannual reports for each cavern (to coincide with the termination of the injection or withdrawal cycles) containing the following information (volumes shall be stated at 14.73 psia and 60°F):
 - a. the daily volume of natural gas injected and withdrawn;
 - b. the inventory of natural gas and shut-in wellhead pressure for each cavern at the end of reporting period;
 - c. the maximum daily injection and withdrawal rates experienced for the entire storage field during the reporting period;
 - d. the average working pressure on such maximum days taken at a central measuring point where the total volume injected or withdrawn is measured;
 - e. the results of any tests performed to determine the actual size, configuration, or dimensions of the storage caverns;
 - f. a discussion of current operating problems and conclusions;
 - g. other data or reports which may aid the Commission in the evaluation of the storage project; and
 - h. the results of leak detection tests performed during storage operations to determine the integrity of each cavern/wellbore, casing and wellhead.
10. Windy Hill shall file semiannual reports in accordance with section 157.214 (c) of the Commission's regulations for a period of one year following the issuance of this order.

APPENDIX B
Unocal Windy Hill Gas Storage LLC
Environmental Conditions

As recommended in the EA, this authorization includes the following condition(s):

1. Windy Hill 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 (EA), unless modified by this Order. Windy Hill 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 and activities associated with abandonment of facilities.

3. **Prior to any construction**, Windy Hill shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors, and contractor personnel will be informed of the environmental inspector's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility location shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Windy Hill shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for

the facilities approved by this Order. All requests for modifications of environmental conditions of this Order or site-specific clearances must be written and must reference, locations designated on these alignment maps/sheets.

5. Windy Hill shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas must be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of the OEP **before construction in or near that area.**

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

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

- a. implementation of cultural resource 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.
6. **Within 60 days of the acceptance of this certificate and before construction begins**, Windy Hill shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Windy Hill would implement the mitigation measures required by this Order. Windy Hill must file revisions to the plan as schedules change. The plan shall identify:
 - a. how Windy Hill would incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and

- specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
 - b. the number of environmental inspectors assigned per spread, and how the company would ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. company personnel, including environmental inspectors and contractors, who would receive copies of the appropriate material;
 - d. what training and instructions Windy Hill would give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - e. the company personnel (if known) and specific portion of Windy Hill's organization having responsibility for compliance;
 - f. the procedures (including use of contract penalties) Windy Hill would follow if noncompliance occurs; and
 - g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. the completion of all required surveys and reports;
 - ii. the mitigation training of onsite personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.
7. Windy Hill shall employ at least one environmental inspector. The environmental inspector shall be:
- a. responsible for monitoring and ensuring compliance with all mitigative measures required by this Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of this Order, and any other authorizing document;
 - d. responsible for documenting compliance with the environmental conditions of this Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - e. responsible for maintaining status reports.
8. Windy Hill shall file updated status reports prepared by the head environmental inspector with the Secretary on a **biweekly** 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 spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - b. a listing of all problems encountered and each instance of noncompliance observed by the environmental inspector(s) during the reporting period both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies;
 - c. corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;
 - e. a description of any landowner/resident complaints which may relate to compliance with the requirements of this Order, and the measures taken to satisfy their concerns; and
 - f. copies of any correspondence received by Windy Hill from other federal, state or local permitting agencies concerning instances of noncompliance, and Windy Hill's response.
9. Windy Hill 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 affected by the project are proceeding satisfactorily.
10. **Within 30 days of placing the certificated facilities in service**, Windy Hill 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 Windy Hill has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
11. Windy Hill shall defer implementation of any treatment plans/measures (including archaeological data recovery), construction of facilities, and use of all staging,

storage or temporary work areas and new or to-be-improved access roads for the pipeline right-of-way until:

- a. Windy Hill files with the Secretary cultural resource survey and evaluation reports, any necessary treatment plans, and the Colorado State Historic Preservation Officer's comments; and
- b. The Director of OEP reviews all cultural resources survey reports and plans and notifies Windy Hill in writing that treatment plans/mitigation measures may be implemented or construction may proceed.

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

12. Windy Hill shall file a noise survey with the Secretary **no later than 60 days** after placing the Compressor Station in service. If the noise attributable to the operation of the facility at full load exceeds an Ldn of 55 dBA at any nearby NSAs, Windy Hill should install additional noise controls to meet that level **within 1 year** of the in-service date. Windy Hill should confirm compliance with the Ldn 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.