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Decision 00-05-048 May 18, 2000

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Lodi Gas Storage, LLC for Certificate of Public Convenience and Necessity for Construction and Operation of Gas Storage Facilities.	Application 98-11-012 (Filed November 5, 1998)

(See Attachment A for a List of Appearances.)

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OPINION ON LODI GAS STORAGE'S APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT AND OPERATE A GAS STORAGE FACILITY

1. Summary

By this application, Lodi Gas Storage, LLC (LGS, or applicant) seeks a certificate of public convenience and necessity (CPCN) to develop, construct, and operate an underground natural gas storage facility and ancillary pipeline and to provide firm and interruptible storage services at market-based rates.

This decision certifies the Environmental Impact Report (EIR) for LGS' project. It also grants LGS' application after weighing the statewide need for competitive gas storage in California as well as the factors set forth in Pub. Util. Code § 1002, and the outcome of the EIR. This decision conditions the CPCN primarily on the conditions and mitigation set forth in the EIR. The decision also requires LGS to obtain adequate liability insurance and a surety or performance bond and certain permits prior to construction.

As a result of our granting this application, LGS will become a public utility with respect to the project authorized by the CPCN and as a public utility, will have eminent domain power pursuant to Pub. Util. Code § 613. However, LGS will have to comply with Pub. Util. Code § 625 before it can exercise the power of eminent domain. Because the eminent domain issue was of great concern to many interested parties and community members, we also elaborate on LGS' future obligations with respect to § 625.

2. Background

A. Brief Overview of the Recent Changes in the Natural Gas Industry

The natural gas industry underwent considerable change in the 1980s and 1990s, with major policy changes occurring at both the federal and state level. Before these changes, investor-owned utilities provided all natural gas services to customers within their service territories. The three largest investor-owned natural gas utilities in California are Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), and San Diego Gas and Electric Company (SDG&E). Historically, the Commission has regulated these utilities' monopoly activities and, under traditional ratemaking, has authorized and reviewed most utility actions and operations. The Commission determined the utility customers' gas costs through regulatory ratemaking decisions, which set rates for the entire "bundle" of services the utility provides (including supply, pipeline transmission, distribution, storage, metering, and billing.) Historically, rates were based principally on the costs of purchasing and delivering natural gas.

Today in California, some gas customers can choose to purchase different natural gas services from different companies. Increasingly, large commercial and industrial customers and groups of smaller customers are arranging to purchase their own natural gas supplies directly from gas producers, and then are paying pipeline companies and local gas utilities to deliver the purchased gas to the customers' facilities. These customers may also benefit from purchasing natural gas storage services. This service allows customers to purchase and store gas when prices are relatively low and supplies are relatively high. These customers can then withdraw the gas from storage for

use when prices are high or supplies are scarce, such as during a severe cold spell.

The rapid changes in the natural gas industry during the past decade started when the Federal Energy Regulatory Commission (FERC) mandated open access and allowed unbundled services on interstate natural gas pipelines throughout the United States. Under open access, pipeline companies must allow other gas companies and customers to bid for and reserve transportation capacity on their pipelines. California gas users could then purchase their gas supplies directly from natural gas producers across the western half of North America and arrange with other companies to provide the other gas services they need.

In 1992, the California Legislature formally expressed its objective of creating competition for natural gas storage services. The Legislature passed and the Governor approved Assembly Bill (AB) 2744 (Chapter 1337 of the California Statutes of 1992, which is uncodified), which made certain findings about gas storage and urged certain action by the Commission. The Commission has summarized AB 2744 as not requiring, but urging, Commission action in the gas storage area.

> "...AB 2744 does not require action by the Commission, but it does make legislative findings about gas storage and urges certain actions by the Commission.
>
> "In summary, AB 2744 finds that: (a) storage has gas service benefits; (b) there are barriers to investment in new storage facilities; primarily the inability of independent storage providers to compete in an open storage market; and (c) unbundling of utility storage service will greatly increase the benefits of storage. The Legislature then urges that the Commission:
> (1) expeditiously unbundle utility storage service,
> (2) encourage the development of independent storage by establishing interconnection rules and reasonable

> cost allocations, (3) adopt market-based storage rates, (4) give expedited consideration of applications for certificates of public convenience and necessity (CPCNs) filed by independent storage providers, and (5) ensure that storage costs borne by core customers are commensurate with benefits.
>
> "This decision [the Gas Storage Decision] directly responds to all of the Legislature's urgings except the item on expedited handling of CPCN applications. We intend to give CPCN applications a high administrative priority, but we cannot overlook due process and other statutory requirements in doing so." (*Re Natural Gas Procurement and System Reliability Issues; Re Southern California Gas Company*, Decision (D.) 93-02-013, 48 CPUC2d 107, 126 (Gas Storage Decision).)

The Commission issued various decisions in order to increase competition in the gas industry. Among other things, the Commission removed the cross-subsidies of utility-provided non-core natural gas storage services,[1] and responded to the Legislature's urgings in AB 2744. (See generally the Gas Storage Decision.) Specifically, in the 1993 Gas Storage Decision, the Commission adopted a "let the market decide" policy for gas storage. The Commission stated that it should not test the need for new gas storage projects on a resource planning basis, so long as all of the risk of the unused new capacity resides with the builders and users of the new facility.[2] The Gas Storage Decision

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[1] Eliminating the cross-subsidies means that utilities cannot subsidize their non-core storage operations with revenue gathered from other service areas. In other words, these gas storage projects must operate on a stand-alone basis, with their profitability depending solely on the utility's ability to effectively market its storage services.

[2] In the Gas Storage Decision, the Commission stated that its "let the market decide" policy was consistent with Pub. Util. Code §§ 451 and 1001. However, the Commission also recognized that it was not abandoning regulation of gas storage and that CPCN's

Footnote continued on next page

also adopted market-based rates for noncore storage including incremental rates for service derived from new or expanded facilities. The Gas Storage Decision also approved SoCalGas' and SDG&E's proposed permanent storage programs. In a subsequent decision, D.94-05-069, the Commission adopted a permanent storage program for PG&E as well.

These Commission decisions set the stage for allowing other non-utility companies to develop storage facilities in competition with PG&E and SoCalGas, the only two California utilities presently able to offer storage services. Several years ago, the Commission approved a CPCN for the first of these non-utility storage facilities, the Wild Goose facility in Butte County, to operate. (See *Application of Wild Goose Storage Inc. for a CPCN to Construct Facilities for Gas Storage Operations*, D.97-06-091 (Wild Goose Decision).) The instant application is the second application for a CPCN to offer competitive gas storage services to be considered by the Commission.

In the Gas Storage Decision, the Commission left open the issue of whether independent gas storage providers are public utilities. This issue is significant to this application because if an independent gas storage provider is a public utility, it would have the power of eminent domain under the rationale set forth below. However, Wild Goose's application resolved this issue, because after receiving its CPCN, Wild Goose became a public utility (see D.97-06-091, *slip op.* at p. 20, Finding of Fact 11), and subsequently exercised the power of eminent domain for property necessary for the construction and maintenance of its gas storage facility.

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were still necessary to the extent required by law. (See generally discussion of need issue which follows.)

The underlying rationale is that upon receipt of a CPCN, an applicant becomes a "gas corporation," which Pub. Util. Code § 222 defines as "every corporation or person owning, controlling, operating, or managing any gas plant for compensation within this state... ." Pub. Util. Code § 221 defines "gas plant" as including all real estate, fixtures, and personal property, owned, controlled, operated, or managed in connection with or to facilitate, among other things, gas storage. Pub. Util. Code § 613 provides that a gas corporation may condemn any property necessary for the construction and maintenance of its gas plant.

The Commission has also recently initiated its Gas Strategy Rulemaking 98-01-011, which is assessing the current market and regulatory framework for California's natural gas industry to identify services for which the public interest suggests the need for greater competition and to determine the steps that the Legislature and this Commission must take to facilitate healthy competition.

D.99-07-015, slip op. at 23, discussed methods other than constructing competitive gas storage facilities to further increase competition in the gas storage area, such as creating a system of tradable storage rights to existing gas storage.

> "There is reason to believe that it would promote more efficient use of the hard-to-find gas storage resources if individual shippers and customers could bid for firm storage access rights. In addition, the local distribution company will be motivated to pursue more complete utilization of its storage assets if its shareholders bear the risk for cost recovery. If accompanied by an active secondary market, the bidding and trading of storage rights should lead to pricing that reflects demand. A market-based price for storage should spur the development of more storage capacity, or other alternatives to storage, when existing capacity becomes scarce.

> "In addition, we anticipate that the existence of an active secondary market for storage would reduce a utility's ability to increase its storage revenues in an unfair manner. Shippers should be more willing to acquire storage rights when they know they will have the ability to sell unused capacity on the secondary market. As more of the storage rights are held by market participants other than the utilities, the utilities' ability to gain from manipulation of storage prices is reduced. As with our proposal for transmission rights trading, this option should advance our goals of mitigating potential competitive abuses, and providing a wider array of choices to market participants.
>
> "In the next phase of this inquiry, we ask parties to consider the costs and benefits related to creating a system of tradable storage rights in Southern California that places the utility at risk for unused resources and preserving such a market in Northern California beyond the period of the Gas Accord. As part of that discussion, we wish to consider the merits of treating the utilities' core procurement departments like any other customer, allowing the core group to bid for and acquire needed storage in the same manner as all others." (D.99-07-015, *slip op.* at pp. 22-23.)

B. Overview of LGS and the Proposed Project

1. LGS

LGS is a wholly-owned subsidiary of Western Hub Properties, LLC (WHP). Haddington Ventures, LLC (Haddington) formed WHP in 1998 to develop natural gas facilities, primarily in the western United States and Canada. WHP is presently owned by two limited partnerships, Haddington Energy Partners, L.P. and Haddington/Chase Energy Partners (WHP), L.P., respectively.

In the mid-1980s, and before forming Haddington Ventures, LLC, the three Haddington principals, Larry Bickle, John Strom and Chris Jones formed and managed Tejas Power Corporation, which later became

TPC Corporation (TPC). Under the management of the three principals, TPC developed the Moss Bluff (Texas), Egan (Louisana) and Tioga (Pennsylvania) salt cavern gas storage projects. The two Gulf Coast projects have a combined deliverability of 1.5 Bcfd and, as of mid-1999, Tioga is about to begin construction. TPC was also an independent gas marketer and one of the largest independent natural gas pipeline companies in the Gulf of Mexico. TPC was sold to PacifiCorp in the spring of 1997. The LGS project management team, Mssrs. Dill (LGS' President) and Bergquist (a WHP Vice President) have substantial experience in the natural gas industry, including gas storage.

2. The Proposed Project

All components of this proposed project are more thoroughly defined in the final EIR, which consists of two separate documents, the Draft EIR and the Final EIR, which cumulatively make up the EIR.[3] We generally refer to the cumulative documents as the EIR, unless referring to a particular section or discussion, in which case we will specifically reference either the Draft or Final EIR.

Lodi Gas proposes to convert a depleted natural gas production field into a storage facility. The field LGS has chosen comprises about 1,450 acres, and is located approximately 5.4 miles, northeast of Lodi in San Joaquin County. The EIR describes the project area as characterized by a mosaic of agricultural fields and orchards. In addition to agricultural lands, which grow wine grapes, among other crops, other land uses in the vicinity of the project include dairies, a fish farm, scattered light-industrial uses, single family residences, and recreation.

[3] We identify both volumes of the EIR for the record as Reference No. 2 for ease of reference.

According to the EIR, although the gas field was declared depleted in 1972, the field still has large pockets of gas trapped in two reservoirs, one on top of the other, that are more than 2,000 feet under the ground surface. A dome-shaped layer of hard shale caps each reservoir and keeps gas trapped in the reservoirs. Each reservoir is pressurized from beneath by a deep, brackish water table. LGS would drill 10 or up to 11 new wells into the two reservoirs to allow customers to inject or withdraw gas from the facility several times a day.

The project has the following principal components: the Lodi gas field, a field collection and water separation facility, a gas dehydration and compressor facility, approximately 33 miles of field and transmission gas pipeline, and two PG&E interconnect and meter stations. The compressor facility and gas pipeline would enable LGS to get the gas into and out of the storage facility, and the pipeline would connect the facility to PG&E's gas transmission pipeline network. LGS' storage customers would make their own arrangements for purchasing the gas and transporting it to and through PG&E's natural gas pipeline system for delivery to the storage facility, and for delivery from the storage facility to the customer.

LGS explains that only the storage rights, and not the mineral rights, are required for the project because the right to store natural gas in a depleted or non-gas bearing reservoir on a property is not a mineral right. Rather, it is part of the rights of a surface owner unless this right has been specifically severed in a deed or other conveyance. However, LGS is also seeking either the mineral rights to the property or consent and agreement of the mineral owners, in some instance limited to the specific zones to be utilized for natural gas storage. According to LGS, this is being done for two purposes: (1) to preclude another owner of the mineral rights from drilling into or through the storage reservoirs and causing damage or recovering the stored gas; and (2) to preclude claims that

there exist remaining recoverable gas reserves in the storage reserves prior to injection of new gas.

The EIR proposes several alternative pipeline routes to that proposed by LGS. These alternatives are discussed more fully below. The EIR also considers an alternative location for the dehydration and compressor facility. In its initial application, LGS proposed to locate the dehydration and compressor facility near Highway 99 and adjacent to a frontage road, where LGS states that noise produced by the compressor facility would be less noticeable. The primary components of this facility include three large piston-type compressors fueled by natural gas plus an operator's control room and related facilities. The compressors would be housed in an approximately 60 foot by 125 foot by 30 foot tall prefabricated metal building. The ventilation sound dampers and the engine exhaust piping may be as tall as 35 feet. Several other small maintenance buildings would also be located on the site. LGS has committed to spend more than $60,000 on air emission mitigation equipment at the compressor facility.

In its amended application, LGS submitted an alternative location for the compressor facility on the southwest corner of the Lind Airport property. The individual facilities and structures on the compressor site would be the same as those described for the proposed project. However, the site would likely be laid out differently than the proposed project site because of the orientation of the field, transmission pipelines, and access road.

The field collection and water separation facility would prepare the gas for transportation through PG&E's system. LGS proposes to construct the water separation facility near the injection wells and a dehydration facility at the gas compressor facility. The purpose of these facilities would be to remove any water absorbed into the gas during storage. LGS would then pump that water

back into the gas storage reservoirs using separate water injection wells which it would drill into the reservoirs at locations where the injected water would not interfere with the injection/withdrawal wells.

In its application, LGS describes its own system capability as offering both firm and interruptible storage services and designed to accommodate an inventory of 12 billion cubic feet (Bcf) of working gas, with a maximum firm deliverability of 500 million cubic feet per day (MMcf/d) and a maximum firm injection capability of 400 MMcf/d.[4]

C. Procedural Background

1. The Application

LGS filed its initial application on November 5, 1998. Subsequently, LGS filed three amendments to the application, dated January 22, February 5, and April 29, 1999, respectively. The first two amendments primarily addressed additions to LGS' Environmental Assessment, and the third amendment primarily addressed LGS' proposed relocation of the compressor facility.

Rule 17.1 of the Commission's Rules of Practice and Procedure (Commission's Rules) provides that notice of the preparation of either a negative declaration or Draft EIR should be given to, *inter alia*, owners of land, under, or on which the project may be located, and owners of land adjacent thereto. Rule 18(b), which provides service requirements for applications, does not contain such a requirement. In order to promote efficiency, so that interested landowners could receive notice of this proceeding as soon as possible, a January 7, 1999 Administrative Law Judge (ALJ) ruling, *inter alia*, required LGS

[4] We clarify here that this is LGS' project description, and does not refer to PG&E's ability to transport gas to and from LGS.

to serve a notice of availability of its application and the ruling on all owners of land, under, or on which the project may be located, and owners of land adjacent thereto.[5] Because the third amendment to the application presented an alternative siting of the compressor station, LGS was also required to undertake similar service requirements as set forth above on landowners affected by the third amendment to the application.

The following parties filed limited or full protests, or responses to the application: The Office of Ratepayer Advocates (ORA); PG&E; and SoCalGas.[6]

2. Non-Environmental Review

After a February 11, 1999 prehearing conference, the Assigned Commissioner and ALJ issued a joint scoping memo and ruling (scoping memo) which recognized that the application involved the interplay between hearings on the non-environmental issues and environmental review. The scoping memo stated that the Commission's Energy Division (ED) would be conducting the environmental review and did not provide a detailed scope and schedule for that process. The scoping memo identified the issues to be addressed in hearings on the non-environmental issues and set forth the schedule for the rest of the proceeding. Pursuant to Pub. Util. Code § 1701.3, the scoping memo designated ALJ Econome as the principal hearing officer.

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[5] LGS was required to send any person receiving a notice of availability a copy of the application within one business day after receiving such a request.

[6] Although SoCalGas served written testimony, it never offered this testimony into evidence or participated in the hearings. On May 4, 1999, it subsequently withdrew from the case, because PG&E addressed the interconnection issue of concern to SoCalGas, and the priorities for SoCalGas' limited resources did not justify further participation on the remaining issues.

Hearings on the non-environmental issues were held from June 14 through 16, 1999. The parties participated in closing argument before Assigned Commissioner Bilas, as well as the ALJ, on June 22, 1999. Additionally, the Commission held two public participation hearings in Lodi on October 19, 1999, where the public could comment on both the non-environmental issues and the Draft EIR.

Pursuant to Rule 8(d), parties were given until June 30, 1999, to submit a written request for final oral argument before the entire Commission. A July 16, 1999 ALJ ruling confirmed that no party submitted such a request, and that such argument would therefore not be scheduled or heard.

Parties filed opening and reply briefs on the non-environmental issues in July 1999. In addition to LGS, the following parties participated in the hearings or filed briefs: LGS, Calpine Corporation (Calpine), California Farm Bureau Federation and the San Joaquin Farm Bureau Federation (Farm Bureau), District Council No. 36,[7] Pacific Realty Associates, L.P. (Pacific Realty), PG&E, Wild Goose Storage, Inc. (Wild Goose), and a group of interested landowner parties referred to as Williams.[8]

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[7] District Council No. 36 collectively refers to District Council No. 36 of the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry and the United States and Canada, AFL-CIO, and its affiliated Local Unions No. 062, 228, 246, and 442 of the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada. We grant the July 20, 1999 motion of the Building and Construction Trades Council of San Joaquin, Calaveras, Alpine and Amador Counties for leave to withdraw as a party and for their law firm to enter an appearance for District Council No. 36.

[8] These individual landowners include Todd and Maureen Williams; David and Mary Perry, Trustees of the Perry Family Trust; Reba Turnbull, Trustee of the Turnbull Family Trust; and Mary Gamblin, Trustee of the Gamblin Family Trust.

On March 24, 2000, after the ALJ's proposed decision in this matter had issued, Pacific Realty moved to withdraw from this proceeding because it had satisfactorily resolved all outstanding issues it had with LGS. In particular, Pacific Realty states that it and LGS "have satisfactorily resolved all issues with respect to the depth and alternate routing of the pipeline, an easement to be granted by Pacific Realty to LGS in connection therewith, and certain environmental concerns relating to the presence of the pipeline on the M&T Ranch. Pacific Realty and LGS have agreed on routing and construction methods for the Pipeline which will not interfere with the farming operations and will enhance the habitat development activities on the M&T Ranch, resulting in a substantial local benefit due to the LGS project." (Pacific Realty March 24 Motion, pages 1-2.) Pacific Realty therefore requests to withdraw James M. Shanks' prepared written testimony as well as his oral testimony at the June 1999 hearings, and the comments of James and Sally Shanks at the public participation hearings held in October 1999, and requests to withdraw as a party to this proceeding.

Pacific Realty's March 24 Motion to withdraw from this proceeding is denied because it is filed after the Commission has expended much time and resources on this proceeding. Because Pacific Realty has settled its differences with LGS, we will consider this information as supplementing its original testimony. However, we do not eliminate the prior testimony from this record at this late date.

On October 7, 1999, the Governor signed into law Senate Bill (SB) 177, which places conditions on the ability of certain public utilities to exercise the power of eminent domain for purposes of providing competitive services. (SB 177 is discussed more fully below.) Because this legislation was not enacted when parties had filed their briefs in July, the ALJ afforded parties the

opportunity to file supplemental briefs on SB 177. The following parties filed opening or reply supplemental briefs: Lodi, the Farm Bureau, PG&E, Wild Goose, and the Williams.

Altogether, the Commission held six days of hearings in this case (including the prehearing conference). Assigned Commissioner Bilas was present for three of those days.

3. The EIR

The EIR sets forth a detailed schedule of the environmental process. On February 17, 1999, the Commission, through its ED, notified LGS that its application had been deemed complete for purposes of Rule 17.1.[9] On February 17, the Commission also mailed a Notice of Preparation (NOP) for the EIR to local, state and federal agencies and the State Clearinghouse for a 30-day review period. The NOP provided a general description of the proposed project and a summary of the main regulations and permit conditions applicable to its development and operation. Responses from these agencies helped to determine relevant environmental issues associated with the project.

Also, to gather information related to the possible environmental effects of this application, the Commission consulted with other affected agencies and jurisdictions. The Commission conducted a Public Agency Outreach Program to establish early contact and open lines of communication with key public agencies that would be directly affected by the proposed project. The program included consultations with more than 25 public agencies conducted at

[9] The ED determined that deficiencies identified in the two deficiency letters sent out by ED had been adequately addressed by LGS' response. Nonetheless, ED stated that additional information may be needed to complete the environmental review process. In fact, LGS' application was not complete as evidenced by its filing a third amendment to the application after February.

central meeting locations, in agency offices, and by telephone. Local agency representatives provided background information, community perceptions, and local environmental concerns.

The Commission also conducted two public scoping meetings to explain the environmental review process and to receive public comment on the scope of the EIR. The Commission held these widely-noticed meetings in two locations convenient to residents who live in the area where LGS proposes to develop its project, as described more fully in the EIR.

In September 1999, the Commission issued its Draft EIR. The Commission accepted written comments on the Draft EIR through November 12, 1999. The Commission held two public information meetings on the Draft EIR in Lodi and Isleton so that the public could learn about the draft EIR and the status of the project, and to answer questions prior to the conclusion of the Draft EIR comment period. In addition, the Commission held two public participation meetings on October 19, 1999, where individuals could make formal comment on the Draft EIR in lieu of submitting written comments.[10]

Jones & Stokes Associates, Inc. were the consultants which assisted the Commission's ED in the EIR's preparation.

3. Standard of Review: The CPCN/CEQA Process

Two different regulatory schemes define this Commission's responsibilities in reviewing LGS' request for the approval of this application. Pub. Util. Code §§ 1001 et seq., require that before LGS can construct this project, the Commission must grant a CPCN on the grounds that the present or future

[10] As set forth above, the public could also comment on the non-environmental aspects of the application at the public participation hearings.

public convenience and necessity require or will require construction of the project. Public Resources Code §§ 21000 et seq. (CEQA) require that the Commission, as lead agency for this project, prepare an EIR assessing the environmental implications of the project for its use in considering the request for a CPCN. (See generally *Re Southern California Edison Company*, D.90-09-059, 37 CPUC2d 413, 421.)

Generally, the CPCN requirements in the Public Utilities Code include a determination of whether the project is necessary. Also, before granting a CPCN, the Commission generally considers an analysis of the financial impacts of the proposed project on the utility's ratepayers and shareholders. The Commission reviews the expected cost of the project and for those projects estimated to cost more than $50 million, it sets a cap, or the maximum amount which can be spent by the utility on the project without seeking further Commission approval. In the Gas Storage Decision and subsequent decisions, the Commission has modified some of these requirements as they apply to competitive gas storage providers under its "let the market decide" policy. These modifications are discussed more fully below.

In addition, under Pub. Util. Code § 1002, the Commission has a statutory obligation, even in the absence of CEQA, to consider the following factors in determining whether or not to grant a CPCN: (1) community values; (2) recreational and park areas; (3) historical and aesthetic values; and (4) influence on the environment.

CEQA requires the preparation of an EIR where there is substantial evidence that a project may have a significant effect on the environment. The lead agency determines whether or not to prepare an EIR, and prepares and certifies the EIR. The lead agency is the governmental body with primary

authority over the proposed project which, for this application, is this Commission.

In preparing the EIR, the lead agency must consider alternatives to the proposed project, including the alternative that there be no new project at all. The lead agency must identify all significant and potentially significant impacts of the proposed project, must identify the mitigation measures available to lessen those impacts, and must determine whether those mitigation measures would reduce the impacts to less than significant levels. If the EIR concludes that the project will still have a significant impact on the environment even after all reasonable mitigation measures are applied, any CPCN must be accompanied by a statement of overriding consideration explaining why the project should still be approved. In any event, the lead agency cannot approve the CPCN until it has certified that the final EIR is complete. The permit that is finally issued must be conditioned on completion of any adopted mitigation measures.

4. Parties' Positions

This section briefly summarizes the position of those parties who participated in the evidentiary hearings on the non-environmental portion of the case. This section sometimes touches upon the parties' positions on the environmental issues raised in the EIR, although those issues are discussed in greater detail in the EIR. This section is a summary, and parties' specific arguments are raised, as appropriate, throughout the discussion in this decision.

LGS states that it has met every condition stated by the Commission to receive a CPCN as an independent storage provider. LGS is the second member of the gas storage community to apply to the Commission to be a competitive gas storage provider. LGS believes that its application furthers the Legislature's goal of facilitating a competitive gas storage market in California, and that under the Commission's "let the market decide" policy, it is appropriate to dispense with

the traditional CPCN need review because the risk of the project falls entirely on the project's investors. Although LGS does not believe a need showing is appropriate for this application, if it is, LGS states that it has met that showing.

LGS believes that it has also addressed community concerns as a good neighbor regarding the project by agreeing to various mitigation measures, such as changing the pipeline route and compressor station location, spending $60,000 on air quality mitigation equipment for the compressor station, and agreeing to bury the pipeline a minimum of four feet (as opposed to three feet required by federal regulation) or deeper, if agreed to with affected landowners, so as not to disrupt agricultural practices. LGS states that its project design and pipe placement addresses safety concerns.

LGS believes that most of the opposition to the project is in reference to short-, and not long-term impacts of the project, because only a limited number of acres (less than 15) will be permanently impacted and taken out of production.

LGS repeatedly states its commitment to compensate landowners through whose property the project must go for the losses associated with the project. That includes the market value of easements or storage rights, the market value of lost crops, both present and future, and the costs of planting and replanting crops. LGS states its preference to do so through individual negotiations.

Some parties raise indemnity questions, such as who will indemnify them in the event of an accident caused by the project. LGS believes that it has ample liability insurance, and has committed to carrying $1 million general liability insurance, with an excess liability policy of $20 to $25 million per occurrence. LGS states that as of June 1999, its current assets were $100,000, but that it anticipates having $30 to $40 million in equity upon the project's completion. Finally, LGS believes that there is no need for the Commission to condition its certificate.

Calpine concurs in the need for this project. Calpine states that because LGS will only be the second independent member of the gas storage community, it will provide an important role in forcing all storage providers to be responsive to market forces. Calpine maintains that the Commission should approve this application because it will improve competition in gas storage facilities and because LGS has met all of the conditions set out by the Commission for approval.

LGS, PG&E, and Wild Goose presented testimony on various interconnection issues such as how LGS' facilities will initially be connected with PG&E's system, and whether interconnection can be accomplished without interfering with existing service. Other issues include whether the Commission should require LGS, as it did Wild Goose, to: (1) provide the Director of the Commission's ED the final total cost of the interconnection, including the share of the cost paid by each entity and (2) to enter into an operating and balancing agreement with PG&E before gas, including cushion gas, flows to the LGS facility on the PG&E system. During hearings, the parties largely resolved these issues. PG&E states that its support for the application is conditioned on the Commission adopting its position on the above issues.

The most hotly contested issues include those raised by landowners and community members. The Farm Bureau, Pacific Realty, and the Williams oppose the project on various grounds, although Pacific Realty has subsequently reached agreement with LGS, and its prior testimony is supplemented to reflect this outcome. The Williams are the only party to contest need.

The Farm Bureau believes that the project significantly impacts the criteria set out in Pub. Util. Code § 1002, namely, community, recreational, historical, and aesthetic values. The Farm Bureau is concerned with the project's impact on the winegrape growing industry. The Farm Bureau also believes that the burden

or risk of this project not only falls on LGS' investors, but also on the local landowners and their community. These include, but are not limited to, many environmental concerns discussed in detail in the EIR such as the project's impact on winegrape agricultural practices, residents' homes and businesses. The Farm Bureau is concerned with impacts such as gas odors, noise, visual blight, reduced tourism, and short- and long-term agricultural production, to name a few.

The Farm Bureau is also concerned that the local landowners will also bear the risk of the project economically, environmentally, and aesthetically. If the Commission approves the project, the Farm Bureau raises various mitigation measures which it believes the Commission should impose on LGS. The Farm Bureau, Pacific Realty, and the Williams believe that the Commission should require LGS to use public rights-of-way, to the extent possible.

Prior to resolving its differences with LGS, Pacific Realty supported a pipeline which maximized the public rights-of-way rather than running through agricultural land, notwithstanding the fact that CalTrans would not consider installing the pipeline along Highway 12, citing to Streets and Highway Code § 661 [in the event of a conflict between CalTrans and the Commission, the powers and duties vested in the Commission shall prevail.] Pacific Realty did not believe that LGS had adequately planned for the pipeline installation, for instance, in areas of soil subsidence. Pacific Realty was concerned with the efficacy of individual negotiations to resolve pipeline easement and placement issues, because if negotiations failed (and this application is granted) LGS would have the power of eminent domain.

Pacific Realty was also concerned with abandonment issues, the economic impact of the pipeline on its future farming operations, and any increased occupational safety liability which may result. Pacific Realty, as well as the

Williams and the Farm Bureau, raised indemnity issues. These parties requested that the Commission require LGS to obtain bonds and/or greater liability insurance than LGS has proposed.

In addition to questioning the need for the project, the Williams also echo many of the concerns of the Farm Bureau and Pacific Realty. The Williams also believe that the project is contrary to Pub. Util. Code § 1002, in that, inter alia, it will substantially decrease the value and desirability of living in the largely rural residential area because of the actual and perceived safety and other environmental risks created by it. The Williams discuss some of these risks, such as the location of the compressor facility near the airport, in greater detail. Citing to testimony offered by their appraiser expert witness, the Williams argue that this perceived and actual risk will cause a substantial decrease in their property values.

The Williams point out that LGS proposes to locate the project in a rural residential area made up of single family homes and small ranch sites. An elementary school and at least 190 homes are within a one and one-half mile radius of the proposed compressor facility. The Williams also suggested necessary mitigation measures in the event the Commission approves this project.

The Farm Bureau, Pacific Realty, and the Williams are also concerned with the unequal bargaining position landowners have with LGS concerning land acquisition because LGS will have the power of eminent domain if the Commission approves this project. This issue was also raised repeatedly in the public participation hearings. LGS states it is committed to bargaining fairly with landowners, and has not used eminent domain in its past projects. If this application is approved, LGS plans to condemn property necessary for its project only as a last resort.

District Council 36's reply brief states that the Commission should not determine the necessity for further hearings until after the Draft EIR issues and the parties have had the opportunity to identify any unresolved issues. The Farm Bureau concurs.

Finally several parties contest how SB 177 should apply to LGS. The parties' positions on this issue are set out in the discussion addressing SB 177.

5. Need

As summarized above, in response to AB 2744 in the 1992 California Legislature, the Commission issued the 1993 Gas Storage Decision. This decision adopted a "let the market decide" policy for competitive gas storage, notwithstanding its statement that "the need for additional storage capacity is less certain [than the need for gas transportation], as shown by the evidence in this proceeding." (Gas Storage Decision, 48 CPUC at p. 119.)

This means that the Commission stated that it would not test the need for new gas storage projects on a resource planning basis, so long as all of the risk of the unused new capacity resides with the builders and users of the new facility.[11] In this case, the scoping memo stated that need is one of the issues to be addressed in this proceeding. LGS addressed this issue under objection, given the Commission's pronouncement in the Gas Storage Decision.

In the Gas Storage Decision, the Commission stated that its "let the market decide" policy was consistent with Pub. Util. Code §§ 451 and 1001. However, the Commission also recognized that it was not abandoning regulation of gas

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[11] The Gas Storage Decision states that "The Commission should entrust noncore storage expansion decisions to market participants. The Commission should not review the need for new storage projects intended to serve noncore customers, as long as all the risk of unused capacity resides with the builders and users of the new facilities." (Gas Storage Decision, 48 CPUC2d at p. 140, Finding of Fact No. 37.)

storage, and that CPCNs were still necessary *to the extent required by law.* (Gas Storage Decision, 48 CPUC2d at p. 127, emphasis added.)

Because CPCNs are still necessary to the extent required by law, LGS' application must still comply with, inter alia, Pub. Util. Code § 1002, which we discuss more fully below. Second, if LGS only relies on the Gas Storage Decision for a presumptive showing of need, it may be difficult for the Commission to determine whether or not there is evidence to support a finding of overriding consideration, if necessary, with respect to the EIR that CEQA requires in this case. In short, in some instances, a fuller showing of need may be necessary to the extent required by law.[12]

LGS' testimony addressing need describes the need for gas storage facilities for the general benefit of California. For instance, LGS states that its project will further the objectives of creating competition in the gas storage business as enunciated by the Legislature in 1992 (in AB 2744), and by the Commission in the 1993 Gas Storage Decision, and notes that it is only the second applicant seeking to develop a competitive gas storage business in California.

LGS also believes there is a need for the project for the following reasons: (1) the project will increase the availability of noncore storage capacity and will assist shippers and marketers in managing their loads more effectively; (2) the project will assist in meeting supply reliability requirements in the California marketplace in the event of, among other things, the loss of transmission capacity or the curtailment of wellhead production; (3) LGS will add to the physical balancing services in PG&E's service territory for large commercial and

[12] Under SB 177, enacted in 1999 and discussed more fully below, certain public utilities must make various showings of need prior to exercising the right of eminent domain. The scope of the need showing required to meet a complainant's burden of proving "necessity" or "necessary" set forth in SB 177 is an open issue.

industrial customers and should eliminate the need for additional system-wide storage; (4) LGS will provide storage which can match changes in electric load and which might thereby affect the price of power in the new competitive era of electric generation; and (5) the project could reduce the need for construction of new natural gas transmission pipelines.

Calpine points out that the Gas Storage Decision recognized the benefits of gas storage, namely "to achieve and maintain access to diverse gas sources so that all gas customers in California can obtain adequate, reliable, reasonably priced gas supplies," and "to reduce the likelihood of peak period curtailments in a cost-effective manner." (Gas Storage Decision, 48 CPUC2d at p. 118.)

The only party to challenge need in the evidentiary hearing was the Williams, although others at the public participation hearing generally questioned need. Based on the California Energy Commission's 1998 Natural Gas Market Outlook, the Williams argued that natural gas will remain in plentiful supply for several decades, its cost is expected to rise at only about 1.4 % a year, and that California will have a sufficient supply of gas through at least 2017.

Therefore, according to the Williams, there is little public need for this project. To the extent the project is necessary to meet price spikes, the Williams argued that the commodity futures trade market is a more efficient way to address spikes. At the public participation hearing and in comments to the Draft EIR, other residents indicated that the general Lodi community will not benefit from the proposed project, and many of them did not use gas at their homes or businesses. In fact, some do not have access to natural gas service.

In response, LGS submits that competitive gas storage assists in the physical delivery of gas, and that storage is an alternative to the construction of additional pipelines which might otherwise be necessary in order to meet

California's gas needs. LGS also believes that its project will be able to serve the needs of many new gas-fired electric generation facilities now awaiting entry into the California market. According to LGS, its project will offer competitive balancing services, in order to more effectively balance gas supplies.

The EIR summarizes the general need for gas storage and states that, even with the tripling of pipeline capacity into California over the last 15 years, as recently as last winter (1998-1999), the state experienced more than 10 days of natural gas shortages, which forced some fossil-fueled power plants in the state to switch to fuel oil. The EIR does not examine all the causes for this event.

As stated above, in the early 1990s, both the Commission and the Legislature have found the need for competitive gas storage facilities. LGS and Calpine reiterate and elaborate on the rationale underlying this need. The record has established a general need for competitive gas storage services in California, and that the benefits of competitive gas storage include (a) increased reliability; (b) increased availability of storage in California; (c) the potential for reduced energy price volatility; and (d) the potential for reduced need for new gas transmission facilities.

6. Pub. Util. Code § 1002

As stated above, under Pub. Util. Code § 1002, the Commission must consider the following factors in determining whether to grant a CPCN:

(1) Community values;

(2) Recreational and park areas;

(3) Historical and aesthetic values; and

(4) Influence on the environment.

The obligation to consider the factors listed in § 1002 is independent of the Commission's CEQA obligation. In addition to its CEQA obligations, Pub. Util. Code § 1002 provides the Commission "with responsibility independent of

CEQA to include environmental influences and community values in our consideration of a request for a CPCN." (See Re Southern California Edison Company, D.90-09-059, 37 CPUC2d at p. 453.)

Neither the scoping memo in this case, nor the Commission's decision in Re Sierra Pacific Power Company, D.96-01-012, 64 CPUC2d 442, is incompatible with our holding in the Edison decision. The scoping memo, which set the scope of issues and whether parties could address these issues procedurally in the environmental or non-environmental portion of the case, stated that "influence on the environment, another factor under § 1002, is considered in the EIR process." This does not mean that the EIR would determine the outcome of this issue, but rather, that the appropriate place for the parties to address this issue was in the EIR, so that the parties would not duplicate their efforts in both portions of this proceeding. Furthermore, Sierra Pacific recognizes and cites with approval the Edison decision (see 64 CPUC 2d at 449), and states that the Commission has independent but overlapping (with CEQA) obligation to consider the factors set out in § 1002. That means that the Commission may consider the EIR and its conclusions in addressing Pub. Util. Code § 1002's criteria "influence on the environment." However, the Commission still has the responsibility, independent of CEQA, under Pub. Util. Code § 1002 "to include environmental influences and community values in our consideration of a request for a CPCN." (Re Southern California Edison Company, 37 CPUC2d at p. 453.)

In addressing whether the proposed project is compatible with community values as set forth in Pub. Util. Code § 1002, we give considerable weight to the views of the local community. In addition, we acknowledge the positions of the elected representatives of the area because we believe they are also speaking on behalf of their constituents. At the time of the issuance of the ALJ's proposed

decision in this proceeding on March 2, 2000, State Assemblyman Pescetti, was on record at the public participation hearing as opposing this project. However, since the publication of the proposed decision, State Senator Johnston, who also has constituents in the project area, has sent a letter to all Commissioners in favor or the project.

The position of the San Joaquin Board of Supervisors is less conclusive. An April 22, 1999 letter from the Board states that the project has merit if many of its proposed mitigation measures are adopted. An individual member of the Board subsequently appeared at the October 19, 1999 public participation hearing and stated that he was very much opposed to LGS obtaining the power of eminent domain. This member also had serious concerns about the impact of the project on the area's winegrape growing industry and in locating the project near the airport.

Since the publication of the proposed decision, Pacific Realty, a landowner who opposed the project and participated in all aspects of this proceeding, has settled with LGS and now supports the project. The majority of the speakers at the two public participation hearings held on October 19, 1999, opposed the project.

A group of six grape growing representatives has signed a memorandum of understanding with LGS, in which they agreed not to oppose the project in return for LGS' agreeing to certain changes in the project's design or construction. However, one of the signatories to the memorandum of understanding appeared at the public participation hearing and indicated that his support for the memorandum of understanding was lukewarm at best. He urged the Commission not to give his position any more weight than that of the other community members who opposed the project. Many other Lodi residents

have also written letters voicing opposition to the project. However, the record demonstrates a divided community.

Some local residents oppose the project, in part, because they believe it may frustrate the community goal of continued development of the Lodi area wine industry. The Lodi area has been a major agricultural and winegrape growing region since the 1850s. The winegrape business contributes a farm gate value of about $300 million a year, with additional community benefits generated by associated jobs and tax revenues. The general community, and particularly the Lodi-Woodbridge Winegrape Commission, has spent about $5 million dollars over the last several years on developing the Lodi Wine Grape Appellation, establishing a scenic wine tour, and facilitating wine tourism in the area. LGS' proposed facility would lie in close vicinity to the tour area and according to local residents, could potentially jeopardize it, and the area's winegrape growing reputation. A witness at the evidentiary hearings and speakers at the public participation hearings were very concerned that the mere existence of this project in close vicinity with their emerging wine tourism could damage the area's winegrape growing reputation by associating the area with gas storage, as opposed to world-class grapegrowing.

We cannot conclude based upon this record that it is reasonable that the existence of this project in close vicinity with the area's emerging wine tourism will damage the public's perception of the area's winegrape growing reputation. Moreover, many of the impacts of the project are shorter-term construction-related, and the EIR concludes that many can be mitigated. For example, the EIR requires LGS to develop a landscape and site design plan, and requires LGS to place the pipeline deeper than the minimum federal requirements to allow certain agricultural practices to continue. Moreover, LGS states that it will appropriately compensate the landowners for the project's

short-term, as well as long-term effects, and that it is willing to provide appropriate mitigation measures to lessen the potential impact upon the industry. The EIR also states that the project's long-term impacts can be mitigated to less than significant levels.

LGS argues that the project will benefit the local community because it will bring needed tax revenues into the community and will provide for construction-related and long-term jobs for the area. Some members are concerned that the project may jeopardize revenues generated by the local wine industry and result in additional public safety costs for the community.

At both the evidentiary and public participation hearings, many community members raised safety and environmental concerns, which are addressed in more detail in the EIR discussed more fully below. According to the EIR, most, if not all, of these concerns can be mitigated. Therefore, the EIR does not recommend that the Commission reject the project from an environmental perspective.

We cannot totally mitigate all community concerns to the level that we can find that this project is entirely compatible with community values. However, these concerns can be substantially mitigated with the following conditions so that, in balancing the community values with the other criteria set forth in Pub. Util. Code § 1002, the general need for and benefits of competitive gas storage facilities in California, and the outcome of the EIR, we can approve the application as conditioned herein.

In reaching our determination to approve the application, we have given considerable weight to the concerns of local community and their local officials. In approving the application, we add additional conditions to address certain community member concerns. The first condition regards LGS' financial ability to compensate those injured in the event of an accident and to follow through on

the commitments made to the community during the course of this application. As stated above, LGS is a limited liability company with the gas storage project constituting the major asset of the company. LGS presently, before the operation of the project, has approximately $100,000 in its bank account. LGS states in its brief that it receives additional equity calls pursuant to its investors' commitments. When construction begins, LGS anticipates a debt/equity ratio of approximately 50/50. Because LGS estimates the project costs to be in the $60 to $80 million dollar range,[13] LGS states that there will be approximately $30 to $40 million equity in the project. LGS also testified that it presently holds a $5 million general liability policy, and once construction begins through operation, the general liability policy will be reduced to $1 million, and LGS will obtain an umbrella policy in the amount of $20 to $25 million per occurrence. LGS testified that LGS will be wholly responsible for all of its liabilities and that the shareholders will not guarantee any of those liabilities, although LGS' witness expected that the investors would voluntarily fund the amount necessary to fulfill LGS' project obligations.

The Williams recommend that, if the Commission approves this project, it should require LGS to obtain liability insurance in the amount of $50,000,000 and to post a bond to cover its future obligations to landowners along the project. The Farm Bureau also argues that the Commission should require LGS to set up a fund to pay for ongoing maintenance landscaping and indemnification

[13] Pub. Util. Code § 1005.5 requires this Commission to specify a construction cost cap for projects whose estimated costs are over $50 million. LGS estimates that its project will cost over $50 million. The purpose of §1005.5 is to limit cost recovery from ratepayers under a more traditional cost-of-service rate-of-return ratemaking scheme. Because LGS' rates should be market-based, ratepayers are not financing this project and we do not have concerns regarding cross-subsidization by ratepayers, we waive the cost cap requirement of §1005.5.

commitments as well as future post-closure and abandonment activities. LGS argues that it is adequately financed, that it has adequate liability insurance and there is no need to condition the project further on this issue.[14]

The EIR addresses safety issues and concludes that although the Commission "cannot state that there is absolutely no risk from natural gas facilities, the draft EIR documents that the risk is extremely small and that required prevention and protection measures would be in place to protect the public. With all the required safety measures in place, the CPUC believes that this facility could be operated safely and that no additional measures are warranted." (Final EIR at p. 1-3.)

Although the EIR finds the safety risks of this project to be extremely small, we believe that the community concerns can be mitigated to some extent if it is clear that LGS will have adequate liability insurance as well as a bond to ensure that LGS meets its project obligations. LGS testified that LGS will be wholly responsible for all of its liabilities and that the shareholders will not guarantee any of those liabilities. Therefore, we require as a condition of issuance of the CPCN that, before construction begins until one year following the termination of the project operations, LGS maintain a general liability policy of $1 million, as well as an umbrella policy in the amount of $50 million per occurrence. Furthermore, LGS is also required to provide a surety or performance bond in the amount of $20 million to cover the costs of meeting its obligations under this CPCN. These costs include, but are not limited to, reburial of the pipeline in the event of subsidence of the soil covering the pipeline, costs

[14] Pacific Realty also recommended that the Commission impose financial assurances on LGS as a condition of the CPCN. However, as noted above, Pacific Realty's testimony is supplemented by its settlement with LGS and its subsequent agreement to support this application.

of restoring the area in the event of abandonment or bankruptcy, etc. The surety or performance bond shall remain in effect until one year following the termination of project operations.[15] This condition is not unusual, and other applicants have voluntarily agreed to liability insurance and a surety bond to cover the events which might not be covered by the insurance policy. (See e.g. *Re Pacific Pipeline System, Inc.*, 65 CPUC2d 613, 630.) Moreover, as noted in the preceeding footnote, the EIR requires that LGS provide a surety bond to guarantee that ongoing landscaping will occur.

In addition, community members have raised safety issues regarding locating the compressor facility near the airport and drilling under the levees. The EIR addresses both of these issues. However, in addition, we will require that LGS shall not begin construction on any aspect of the project until LGS first obtains: (1) a determination from the Airport Land Use Commission that the project is consistent with the local land use plan, or if not, until LGS has obtained an amendment to the plan to allow the project; and (2) all necessary permits from the California State Lands Commission.

Also, in order to ensure that the community is aware of the construction progress, we direct the Commission's Energy Division to continue outreach efforts during the construction phase of the project such as sending periodic newsletters to those persons served with notices regarding the EIR, and posting the monitoring reports on the Commission's web page at frequent intervals.

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[15] The EIR requires LGS to provide a surety bond in the amount of the estimated annual cost of maintaining the landscaping. The surety bond shall remain in effect until one year following the termination of project operations. (See Draft EIR at p. 3.12-7.) LGS may subsume this requirement into the bond required by this decision so that it is not

Footnote continued on next page

According to the EIR, the Energy Division should review certain plans by LGS, such as LGS' plans prior to issuing a request for bids, within a specified period (i.e., within two weeks). To the extent that Energy Division requires a reasonable extension of the time stated in the EIR to conduct its review and monitoring activities, it has the authority to reasonably extend this period of time.

7. Interconnection Issues

In order for the Commission to find that the present or future public convenience and necessity requires construction of the project, the Commission should make findings on the manner in which LGS' facilities will initially be connected with PG&E's system, and determine if interconnection can be accomplished without interfering with existing service.

In the Gas Storage Decision, the Commission, among other things, addressed cost responsibility associated with interconnecting third-party storage providers.

> "...Utilities should interconnect with independent storage providers as if the latter were consumers of gas. Thus standard interconnection costs will be recovered on a rolled-in basis. Special facilities costs will be charged to the storage provider." (48 CPUC2d at 127; see also Wild Goose Decision, *slip op.* at 11.)[16]

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required to obtain two separate bonds or to increase the amount of the bond required by this discussion.

[16] More specifically Rule 2.3 of the Commission's Adopted Rules for Gas Storage Service provides in relevant part:

> "The utility shall be responsible for the cost of standard interconnection facilities required, installed, and paid by the utility for transportation customers having similar loads. Responsibility for special facilities in excess of standard interconnection facilities will be assigned by agreement of the Parties or will be submitted to the Commission for resolution. Utility ratepayers shall not be

Footnote continued on next page

LGS and PG&E have agreed to the interconnection principles attached hereto as Attachment E. The interconnection principles (a) list the interconnection facilities to be installed and owned by PG&E at each of the two interconnection points, and (b) set forth who will pay for the facilities.

This interconnection agreement is analogous in scope and depth (although not in content) to an earlier agreement between PG&E and another third-party storage provider, Wild Goose, which agreement the Commission approved in the Wild Goose Decision, *slip op.* at p. 25, Ordering Paragraph 7 and Appendix B.

According to this agreement, LGS will pay for all of the facilities, whether they are standard or special facilities. The interconnection costs will be borne by LGS and not by PG&E's ratepayers, and the two parties directly affected by the interconnection principles (i.e. LGS and PG&E) have agreed to them. For these reasons, the interconnection principles are reasonable and we adopt them for this proceeding. As in Wild Goose, the approval of this interconnection agreement is for this facility and this proceeding only, and we do not determine in this proceeding what the cost allocation for future cases should be.

In the Wild Goose Decision, the Commission also required Wild Goose to provide the Director of the Energy Division the final total cost of the interconnection, including the share of the cost paid by each entity, because this information was not set forth in the interconnection principles. (Wild Goose Decision, *slip op.* at p. 25-26, Ordering Paragraph 7.) Although LGS has provided some estimates of project cost, we require LGS to provide the Energy Division

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responsible for costs of special facilities. The utility shall not delay installation of interconnection facilities pending resolution of any dispute regarding cost responsibility." (48 CPUC2d at pp. 144-145.)

with a supplemental filing similar to the one we required in the Wild Goose Decision.

PG&E also requests that the Commission order LGS and PG&E to enter into an operating and balancing agreement before gas, including cushion gas, flows to the LGS facility on the PG&E system. No party contests this request. We require that LGS and PG&E have an operating and balancing agreement in place before LGS commences its operations, and that LGS file this agreement with the Commission's Energy Division and serve it on all the parties to this proceeding. (See Wild Goose Decision, *slip op.* at p. 25, Ordering Paragraph 6.)

8. Market Power

LGS demonstrated that it does not currently have market power in the gas storage market, since it: (a) is a newcomer to the California gas storage market; (b) starts out with a customer base of zero; and (c) is not in a position to force any of the other utilities to exit the market. No other party contested this evidence. As in the Wild Goose proceeding, there is no evidence on this record that LGS possesses significant market power in the California gas storage market, and any concerns regarding anticompetitive behavior, including predatory pricing, can best be addressed by the Commission's complaint or investigatory process rather than requiring cost justification tariffs. Therefore, as we did in the Wild Goose Decision, we will permit LGS to charge market based rates within a rate zone. LGS should file tariffs with a rate window to allow for fluctuations in the market. As in the Wild Goose Decision, LGS need not file any cost justification with its tariffs. (See generally D.98-06-083, *slip op.* at pp. 3-6.)

9. Certifying The EIR

A. The EIR Process

The EIR is part of the record, quite voluminous, and will not be reproduced in full here. As stated above, the EIR consists of two separate documents, the Draft EIR and the Final EIR, which cumulatively make up the EIR. We refer to the cumulative documents as the EIR, unless referring to a particular section or discussion, in which case we will specifically reference either the Draft or Final EIR. This section provides a summary of the EIR process and certifies the EIR.

Additionally, attached to this decision as Attachments B and C are two tables addressing the mitigation measures which the Final EIR proposes. Attachment B summarizes the environmental impacts and mitigation measures of the proposed project as well as the three alternatives the EIR reviews. Attachment C summarizes the mitigation monitoring plan of the composite route alternative, which is the EIR's preferred alternative. Attachment D sets forth LGS' proposed mitigation measures, which are also set forth in the Draft EIR at pp. 2-37 through 2-46.

For purposes of evaluating the project under CEQA, the "proposed project" identified in the EIR is the project formally presented in LGS' application as modified by the three amendments to the application and LGS' proposed mitigation measures. The EIR assumes that LGS will meet all the construction specifications and will complete all mitigation measures.

LGS states it has been negotiating with individual landowners to develop lease agreements and easements for the proposed pipeline and other facilities. Indeed, there has been much controversy in the non-environmental portion of the case about such negotiations, such as the alleged unequal bargaining position of LGS vis-a-vis landowners, if LGS is able to assert the

power of eminent domain, etc. The EIR does not include a review of the terms of these private agreements, but rather considers broad impacts on the natural and human environment, such as the effects on prime farmland in Sacramento and San Joaquin counties.

The EIR notes that LGS will continue to negotiate with individual landowners and the negotiations may result in minor adjustments to the proposed pipeline route to accommodate individual landowner needs. The Commission does not anticipate that these minor changes would result in different environmental impacts from those described in the EIR. However, the EIR states that if the Commission approves the proposed project, LGS would have to apply to the Commission for approval of a variance, if LGS makes any changes in the proposed route or other project components. We affirm this requirement.

The EIR made the following assumptions to evaluate the potential environmental impacts of the project. Each environmental issue in the EIR is analyzed based on significance criteria suggested in the CEQA Guidelines. When the Guidelines do not suggest specific significance criteria, the EIR employs professional judgment to develop reasonable significance thresholds. Potential impacts are categorized as (1) significant and unavoidable; (2) significant, but able to be mitigated to a less than significant level; or (3) less than significant. When the analysis presented in the EIR shows that no impact will occur as a result of the project, that impact is generally not discussed further. When the EIR determines that the proposed project could potentially cause significant environmental impacts, the EIR identifies feasible mitigation measures to reduce the impact to a less than significant levels.

The EIR states that during the review, consideration was given to the permits and approvals LGS must obtain from other agencies to construct and

operate the proposed facilities. For many design, construction, and operation issues, the responsible federal, state, and local regulatory agencies' permit review processes require that LGS implement measures to ensure proper implementation of the project. For example, the EIR points to the U.S. Department of Transportation, Office of Pipeline Safety, which is responsible for ensuring that the design of the pipeline meets stringent standards adopted by the federal government to protect public health and safety. Because the U.S. Department of Transportation, Office of Pipeline Safety has a major role in reviewing and approving the safety of the proposed pipeline, and state and federal laws require LGS to obtain design approval from this agency, the EIR assumes that these standards will be implemented. The EIR focuses on any remaining or residual potential impacts resulting from implementation of the project. In other words, the EIR is based on the assumption that LGS would operate its facilities within the parameters of the required permits, and that operations in excess of permitted levels would require new discretionary permits and additional environmental review.

B. Alternatives to the Project

The EIR describes the screening process in which LGS engaged before filing this application. LGS reviewed alternative means of providing natural gas storage and analyzed alternative gas storage locations. From this analysis, LGS further narrowed its analysis to four gas fields. Although technically feasible as gas storage reservoirs, LGS eliminated them from further consideration because two would not meet the project objectives and two reduced economic feasibility and had the potential for greater environmental impacts.

During preparation of the Draft EIR, the Commission developed three alternative pipeline routes, all of which are technically feasible and

acceptable to LGS. These alternatives were developed in response to public concerns during the scoping process regarding disruption of agriculture production and consistency with county and Delta Protection Commission policies regarding the consolidation of gas pipelines into transmission corridors. The alternative routes are: (1) the Public Right-of-Way Alternative, where the pipeline would generally run along established rights-of-way; (2) the Existing Pipeline Corridor Alternative, where the pipeline would generally run along an existing pipeline corridor; and (3) the Composite Route Alternative, which uses both established rights-of-way and existing pipeline corridors. All three alternatives include an alternative location for the compressor southwest of Lind airport, instead of northeast of Highway 99 and Peltier Road. Because of conditions and the location of various facilities in the project area, all of the alternatives use public right-of-way and existing pipeline corridors to some extent.

The EIR discusses the various alternatives at length, and determines that the Composite Route Alternative is the preferred alternative, largely because it has one less significant and unavoidable environmental impact than does the proposed project (see Attachment B). The EIR also has concerns about the other proposed alternatives. The EIR states that although use of the existing public right-of-way alternative may be preferable in some areas, in other areas this alternative route may run closer to residences than the original planned route. The EIR reasons that the pipeline would be placed outside of the current Caltrans right-of-way along Highway 12 because Caltrans typically discourages longitudinal easements and because Caltrans is studying the widening of Highway 12. East of Highway 5, the Existing Pipeline Corridor has greater impacts on private landowners because it does not follow the existing rights-of-way, as does the preferred alternative through most of that portion of

the route. LGS has stated that the Composite Route Alternative is now its preferred route and includes its preferred compressor facility location. We adopt the Composite Route Alternative in our approval of this application.

C. Environmental Impacts

The EIR analyzes the environmental impacts, mitigation measures, and significance after mitigation under the following categories: (1) land use, planning, and agricultural resources; (2) population and housing; (3) geology, soil, and paleontology; (4) hydrology; (5) air quality; (6) transportation and circulation; (7) biological resources; (8) energy and mineral resources; (9) public health and safety; (10) noise; (11) public services and socioeconomics; (12) visual resources; and (13) cultural resources. The EIR determines that under its preferred alternative, all significant environmental impacts except one can be mitigated to a less than significant level. The EIR discusses the potential environmental impacts at a project-wide level, but does not consider the project's impacts on specific individual landowners (i.e., any review of negotiated easement agreements between LGS and individual landowners, etc.).

This section highlights the key areas of environmental concern and the mitigation the EIR recommends to address those concerns. This discussion focuses primarily on the environmental impacts for which the EIR requires mitigation. Unless otherwise stated, the EIR finds that the mitigation measure reduces the identified environmental impact to a less than significant level. This discussion is not set out under the 13 categories listed above, but is organized around the key community concerns. Because the EIR's recommended mitigation for the proposed project and alternatives is identical except in the area

of land use, planning, and agricultural resources, the mitigation measures discussed apply to all alternatives unless otherwise stated.[17]

1. Safety

Safety is important in the design and construction of any facility that handles or stores natural gas, because natural gas is explosive in certain conditions. The EIR examines the potential for a fire or catastrophic explosion resulting from facility operation, including during a major earthquake, and analyzes the systems and procedures proposed by LGS to ensure the project's safety.

The EIR's safety analysis also relies on the U.S. Department of Transportation's Office of Pipeline Safety (Office of Pipeline Safety), which is the agency primarily charged with regulating safety of natural gas pipeline facilities. The EIR's safety analysis is based on the assumption that LGS will construct and operate the project in accordance with the Office of Pipeline Safety regulations. The Office of Pipeline Safety regulations govern where a pipeline can be placed, the design features of the pipeline, the minimum depth it must be buried, and how often and thoroughly it must be inspected. As required by the U.S. Department of Transportation, an operating and maintenance plan would establish the written procedures for the operation, inspection, maintenance, and repair of the project pipelines, equipment, and facilities.

Additionally, the EIR requires LGS to comply with the requisite safety management programs of other regulatory bodies by instituting the following plans and programs: (1) operating and maintenance plan and inspection program; (2) damage prevention program; (3) emergency response

[17] The discussion below specifically identifies the recommended mitigation measures.

plan; (4) hazardous materials release response plan; (5) fire prevention plan; (6) fire fighting training program; (7) employee drug testing program; (8) safety program; (9) stormwater pollution prevention plan; and (10) groundwater monitoring program.

The EIR also identifies the potential peat fire hazard during the construction of the pipeline as an environmental impact. This is because in the Delta portion of the pipeline alignment, the pipe would be buried in peat soils that are combustible. The EIR states that there is a slight possibility that pipeline joint preparation and welding may initiate a peat fire causing harmful air emissions and damage to property. In mitigation, the EIR requires LGS to develop and implement a peat fire prevention plan as required by the Office of Pipeline Safety, and in consultation with the local authorities. (See Mitigation Measure 3.9-1.)

The location of a portion of the pipeline and the compressor station at and near the airport site raises both land use and safety concerns. In the evidentiary and public participation hearings, people raised safety concerns about locating the compressor near the airport. The EIR requires LGS to construct the project according to federal, state, and local agency requirements. In addition, the Final EIR states that LGS recently received a letter from the Federal Aviation Administration (FAA) that indicates that the proposed project meets all FAA safety requirements.

The Final EIR re-examined safety issues with respect to the location of the compressor facility and confirms that no additional mitigation measures are required. According to the Final EIR,

> "[i]n the unlikely event that an aircraft collided with the compressor facility, gas could be released to the atmosphere. If an ignition source were present, the likely outcome would be a fire that would be directed

> upward and that would continue until all natural gas has escaped from the damaged portion of the facility. Because natural gas is not a liquid, the fire would not spread from the source of the gas leak. Considering the very low density of residences in the area, the low rate of aircraft collisions with buildings, the safety of natural gas, and the lack of substantial quantities of hazardous materials, the location of the alternate compressor site and the buried pipeline facilities is not considered to pose an unacceptable safety risk." (Final EIR at p. 2-11.)

The EIR recommends a mitigation measure to address land use issues surrounding the pipeline and compressor facility's location. The EIR notes that there is uncertainty regarding the applicability of the Airport Land Use Plan to the project facilities. Therefore, as a mitigation measure, the EIR requires LGS to obtain a determination from the Airport Land Use Commission that the project is consistent with the local land use plan, and if not, to obtain an amendment to the plan to allow the project. (Mitigation Measure 3.1-3.) If the Airport Land Use Commission finds that Airport Land Use Plan applies to the project, that no amendment to the plan is appropriate, and if that decision is affirmed on appeal to the County Board of Supervisors, LGS could not build the compressor facility at the site set out in the preferred alternative. If, at that point, LGS were to relocate the compressor facility, such relocation may require further environmental review.

The EIR finds that the potential for increased demand for fire control and emergency response services during both the project's construction and operation is a less than significant impact. This is in part because LGS has committed to providing equipment and training to local fire agencies. To ensure this commitment is met, the Final EIR adds an additional mitigation measure on this issue. (Mitigation Measure 3.11-1.)

To address the project's temporary disruption of traffic and the potential for interference with emergency response routes, the EIR requires LGS to develop and implement a traffic control plan. (Mitigation Measure 3.6-1.)

2. Agricultural Impacts

LGS proposes to drill several wells into the underground gas reservoir northeast of Lodi and to construct a pipeline to connect the wells to PG&E's pipeline system. For the most part, both the wells and the pipeline would be located on or adjacent to land currently used for agricultural purposes, with scattered rural residences and businesses. The EIR addresses the impact the project would have on agricultural resources and operations in the regions, and identifies measures to reduce the impacts to agricultural land.

One such measure is to avoid pipeline construction in and near vineyards during harvest season. (Mitigation Measure 3.1-1.) Another is to bury the pipeline deeper than normal in some areas where certain agricultural practices are used. For example, a mitigation measure requires LGS to bury pipelines at a depth of eight feet in lands that are suitable for grape production but have not been deep ripped, and at least two feet below the bottom of existing irrigation and drainage ditches, or obtain the landowner's agreement to bury the pipeline at a shallower depth. (Mitigation Measure 3.1-2.) LGS also states that it will bury the pipeline deeper than 4 feet where agreed during individual negotiations.

Another mitigation measure requires LGS to prepare and submit a report to this Commission identifying where there the pipeline may potentially interfere with agricultural practices in the future, primarily because of soil conditions, and to undertake necessary remedial actions. (Mitigation Measure 3.3-1.)

These actions could include (1) reburying the pipeline to an appropriate depth; (2) looping the pipeline segment by placing a replacement pipeline segment at a greater depth and removing the shallow segment; (3) importing additional soil cover to maintain the pipeline depth at least four feet below the ground surface, unless it will interfere with existing agricultural practices; or (4) other measures which LGS proposes and this Commission approves. Also, when the project is abandoned, then this same mitigation measure requires LGS to remove pipeline segments in subsiding lands to prevent future interference with agricultural operations.

Another mitigation measure requires LGS weight or anchor the pipeline in areas where saturated soils would not prevent the pipeline from floating. (Mitigation Measure 3.4-1.) LGS must submit the engineering designs and supporting soil studies to the Commission for review.

Comments to the Draft EIR were concerned about subsidence of peat lands in the Delta, and focused on three primary issues: interference with agricultural activities, reduction in levee stability and rate of subsidence. The Final EIR analyzes more information developed for the CALFED Bay-Delta Program to explain subsidence issues. Because this information demonstrates that subsidence rates are less than historic rates, the EIR concludes that its recommended mitigation measures are sufficient.

3. Rural Character

Because the project would be located on rural lands in the Central Valley and Sacramento-San Joaquin River Delta, the EIR examines potential impacts of the project on rural aesthetics and character. The EIR identifies measures for reducing or eliminating visual or noise impacts. Key issues analyzed by the EIR include whether constructed facilities are visually compatible with the surrounding landscape, whether scenic view is affected by

construction, and whether the project would result in noise impacts on people living, working, or attending school near the facilities. The EIR also examines consistency with the Sacramento and San Joaquin County General Plans and other regional plans.

The EIR describes the measures LGS has agreed to implement to minimize disturbance of the visual character of the site including, but not limited to, painting the facilities in earthtone colors to blend with the surrounding vegetation and landscape; screening the compressor facility with trees and other facility components with vegetative landscape; and using shielded non-glaring light at the facility. The EIR states that LGS has agreed to provide a surety bond in the amount of the estimated annual cost of maintaining the landscaping. This bond will remain in effect until one year following the termination of the project's operations.[18] Mitigation Measure 3.12-1 also requires LGS to develop and implement a landscaping and site design plan to address the potential some of the larger project facilities have to degrade the view.

The EIR also addresses the project's compatibility with local land uses. In addressing the proposed project, the EIR finds a significant and unavoidable environmental impact in its pipeline alignment, and that no mitigation is available to reduce the inconsistency of this alignment with local and Delta Protection Commission policies to a less than significant level. This finding is not present in all the alternative pipeline routes, and is not present in the alternative route we're approving in this decision. In addressing the alternative routes' compatibility with surrounding land uses, the EIR recommends several mitigation measures to minimize the project's effects on the

[18] As stated above, all of LGS' agreed-to modifications of the project, such as those just described, become part of the definition of the project which the EIR reviews.

surrounding communities. (See Mitigation Measures 3.1-4 and 3.1-5 for the Pubic Right-of-Way Alternative and Mitigation Measures 3.1-5 and 3.1-6 for the Existing Pipeline Corridor and the Composite Route Alternatives.)

The Draft EIR discusses the temporary disruption that residences and businesses would experience during construction activities. As proposed mitigation, the Draft EIR recommends two mitigation measures. The first is for LGS to employ noise-reducing practices to reduce construction noise. (Mitigation Measure 3.10-1.) The second is to reduce the project construction noise by restricting construction activities from 7:00 a.m. to 7:00 p.m., Monday through Saturday, installing noise-reducing barriers around drilling sites, and employing other noise-reduction activities. In its comments to the Draft EIR, the California Division of Gas, Geothermal, and Oil Resources had concerns about the recommendation to suspend drilling activities in the evening and weekend hours because requiring well-drilling activities to stop at night could compromise the safety and integrity of the wells.

In response, the Final EIR allows nighttime construction but requires LGS to follow a list of additional noise reduction measures. If, after LGS attempts all reasonable and practicable attempts to reduce noise, but nighttime noise levels remain above the significance threshold, the Final EIR requires LGS to offer temporary relocation assistance to affected residents. (See Mitigation Measure 3-10.2.)

Commenters on the Draft EIR expressed concern about regular releases of gas to the atmosphere from the compressor facility, or compressor facility venting. The Final EIR explains that normal operation of such facilities requires an operator to depressurize portions of the system regularly for maintenance. Additionally, LGS may have to release relatively large quantities

of natural gas at high pressures in an emergency. The comments focused on three primary issues: noise, false emergency response alarms and odor.

Since publication of the Draft EIR, LGS performed additional engineering studies and design work. Based on this additional work, LGS will burn or "flare" all normal depressurization events, with the flare tip located in an excavated area on the compressor facility site, surrounded by a berm. The flames associated with normal operations should not rise above the berms and therefore should not generate false emergency response calls. The Final EIR states that CEQA would not require the noise produced from this approach to be mitigated, since it would be less than the noise significance threshold established in the Draft EIR.

Flaring repair and maintenance events will result in a minor increase in compressor facility emissions from those analyzed in the Draft EIR. However, the Final EIR concludes that this small increase does not affect the Draft EIR's emissions analysis.

The Final EIR also concludes that its air quality analysis is sufficient for emergency depressurization events, because they are expected to occur infrequently, about every five to 10 years, and will result in a small increase in emissions. The Final EIR states that because emergency depressurization will result in the release of larger quantities of gas to the flare system, the flare would not rise higher than the landscaping surrounding the project site and therefore would not be highly visible. The Final EIR states that LGS will notify all appropriate agencies in the case of emergency depressurization.

The Final EIR determines that the potential noise impacts from these emergency events are less than significant because such events: (1) would not be excessively loud at the nearest sensitive receptor; (2) are not predictable; (3) are anticipated to occur infrequently, once every 5 to 10 years; (4) are expected to last

no more than 1 hour and noise levels would decline during this period as pressure in the system decreased; and (5) are related to emergency events.

Additionally, the Final EIR adds an additional mitigation measure in order to minimize the occurrence of emergency depressurization events. (Mitigation Measure 3.10-3.)

4. Levee Stability

The pipeline would cross under several major waterways, all of which are kept in their channels by levees, before the pipeline terminates at Sherman Island in the Delta. The EIR discusses the issue of levee stability during and after pipeline placement because much of the surrounding land would be inundated in the event of a levee failure. The EIR also examines the potential impacts from the directional drilling process which LGS proposes to route the pipeline under the waterways.

The EIR states that the State Lands Commission will require LGS to prepare and have approved detailed engineering plans before LGS will be granted a lease to cross state lands, and the State Reclamation Board requires LGS to obtain an encroachment permit from the local flood control or reclamation district. The EIR states that the local districts have the opportunity to impose similar or more stringent requirements than the State Lands Commission on permits to drill under their respective levees. The EIR also notes that requiring LGS to use directional drilling under the levees reduces the risk of a levee failure. With respect to this, and any other state or local discretionary permits, we clarify that the discretionary decision as to whether or not, or pursuant to what conditions, to issue the permits is the sole decision of the state or local entity.

The EIR also states that portions of the proposed pipeline within the 100 year floodplain could potentially be damaged if flood waters erode the soil

cover. Also, because the pipeline is lighter in weight than the soil materials it displaces, the pipeline may float out of the trench when the over covering soil materials become saturated, especially in areas of low strength soil in the Delta. Exposing the pipe to flowing water may impose shear and bending loads that exceed design capacity, possibly causing the pipeline to rupture. Therefore, as a mitigation measure, the EIR requires LGS to use concrete coating, concrete collars, or other suitable methods to weight the pipeline in all areas subject to the 100-year flood, where saturated soils would not prevent the pipeline from floating. (Mitigation Measure 3.4-1.)

5. Water Quality

The EIR examines the potential for groundwater contamination from drilling activities, including contamination from drilling fluids and cross-connection of water tables. Cross-connection occurs when drilling opens a pathway between two separate sources of groundwater. The California Division of Oil, Gas and Geothermal Resources closely monitors well drilling procedures to prevent groundwater contamination. The EIR also examines surface water contamination that could occur wherever the project encounters waterways, including boring under rivers, canals, and ditches. In examining the potential for water quality effects, the EIR relies on the federal Environmental Protection Agency regulations, the California State Water Resources Control Board's and the Regional Water Quality Control Board's rules, regulations, and guidelines, and assumes that the project would be constructed and operated consistent with these agencies' requirements.

6. Geology

The EIR analyzes the potential effect of seismic and other geologic hazards on the project. The EIR considers the potential for destruction of unique

paleontologic resources. The EIR also examines soils in the project area and discusses the potential for erosion and loss of top soil caused by construction and operation of the project. The EIR identifies measures to reduce or eliminate significant impacts, such as having LGS identify in a report to the Commission the areas of unstable soils where pipeline placement could interfere with agricultural practices, and undertaking necessary remedial actions as more fully described above in the discussion on agricultural impacts.

The EIR states that geologic hazards such as seismic activity must be considered in the design of the project, and that when the detailed engineering design of the project is completed, it will be submitted to several responsible agencies for approval. The EIR identifies numerous federal, state, and local agencies which have oversight responsibilities to ensure safety including (1) the U.S. Department of Transportation, Office of Pipeline Safety, which provides oversight of pipeline construction, operation, and safety; (2) the California Division of Oil, Gas, and Geothermal Resources, which provides oversight of design, installation, and operation of gas wells; and (3) San Joaquin County, which provides oversight of aboveground structures and buildings. The EIR states that at a minimum, the project will be designed to meet the seismic safety standards of the Uniform Building Code. The EIR also states that the Office of Pipeline Safety records of natural gas leaks in California show no relationship between pipeline leaks and major seismic events that have occurred since 1985.

7. Wetlands, Wildlife, and Habitat

The EIR examines potential impacts on wetlands, plants, wildlife, and habitats, including seasonal wetlands, vernal pools, and riparian areas. The EIR also identifies measures to avoid, minimize, or reduce impacts on biological resources to less-than-significant levels, such as confining construction activities and equipment to the designated construction work area, and, in areas that are

not agricultural or developed, to restore the construction zone to preconstruction site conditions. (See Mitigation Measures 3.7-3a; 3.7-3b; and 3.7-3c.) Mitigation Measure 3.7-2 also requires LGS to control dispersal of noxious and invasive weeds and pests during construction.

The EIR analyzes potential impacts on fish and wildlife, including species designated as listed and sensitive under the state and federal Endangered Species Act, including the greater sandhill crane, Swainson's hawk, and giant garter snake. The EIR also analyzes the corridors, nesting areas, and habitats used by wildlife in the project's vicinity. The EIR also examines seasonal issues, and addresses the issue of when to avoid construction to protect nesting birds during the mating season.

Sandhill cranes winter in the Delta from September 1 through March 15, and these areas are important for foraging and roosting habitat. The Draft EIR conditioned construction in key areas during these months. In response to comments on the Draft EIR from the California Department of Fish and Game, the Final EIR modified its mitigation and prohibits LGS from constructing near important foraging and roosting habitats from September 1 through March 15 unless, after coordination with the Department of Fish and Game, the Commission determines construction can occur during this period without significantly affecting the sandhill crane. (Mitigation Measure 3.7-6.)

Additionally, Mitigation Measures 3.7-5; 3.7-7; 3.7-8; and 3.7-9 requires LGS to conduct preconstruction surveys, or consult with appropriate government agencies, and follow appropriate mitigation for potential construction disturbances of the valley elderberry longhorn beetle; nesting raptors, owls, and tricolored blackbirds; and nesting Swainson's hawks. Mitigation Measures 3.7-1a; 3.7-1b; and 3.7-1c require LGS to conduct a floristic

survey and follow appropriate mitigation to minimize impacts on special-status plant populations.

8. Air Quality

Both the U.S. Environmental Protection Agency and the California Air Resources Board have designated the San Joaquin Valley as a nonattainment area, that is, an area that does not meet the relevant federal or state air quality standard, for ozone and PM 10. The EIR identifies both stationary and mobile sources of emissions resulting from the project, such as the natural gas-fueled compressors used for moving gas through project facilities, and identifies mitigation measures to reduce or eliminate those impacts from a CEQA analysis.

For example, the EIR directs LGS to comply with the San Joaquin Air District's regulations for, among other things, reducing exhaust from construction equipment and for fugitive dust prohibitions. The EIR requires LGS to water the construction site frequently to control dust. (Mitigation Measures 3.5-1a and 3.5-2.) The EIR also requires LGS to obtain emission offsets for NOx and ROG emission increases or install electric compressor facilities. (Mitigation Measure 3.5-3.) In order to reduce the potential for the release of small amounts of odorized natural gas, the EIR requires LGS to properly maintain above-ground piping components to minimize leaking of odorized gas, and that piping connections be welded to the extent practicable given design considerations. The EIR also requires LGS to inspect and maintain the facilities quarterly and to submit a report to the Commission identifying all detected leaks and repair actions taken no more than one month following each quarterly inspection. This mitigation measure also requires LGS to maintain a hotline to handle odor complaints. (Mitigation Measure 3.5-4.)

The EIR finds that the construction-related ROG and NOx emissions in Sacramento County are a significant and unavoidable environmental impact

for the proposed project and all three alternatives. Although no mitigation is available to reduce this impact to a less than significant level, the EIR recommends as a best management practice, the Commission should require LGS to comply with the San Joaquin Air District's recommendation for construction equipment mitigation measures to reduce exhaust emissions from construction equipment for construction activities within Sacramento County.

Several commenters on the Draft EIR stated that although the compressor facility would comply with the San Joaquin Valley Unified Air Pollution Control District requirements, the EIR should impose additional mitigation on LGS because local residents would still be exposed to substantial emissions. The commenters suggested that the EIR should require LGS to install electricity-driven compressors to eliminate air quality impacts and to reduce potential noise impacts.

In response, the Final EIR concludes that after additional air quality modeling of ozone precursors, their levels would not be considered substantial under CEQA. The Final EIR also refers to the Draft EIR where the noise generated by a gas-fired compressor facility does not require mitigation under CEQA. The Commission's EIR consultant also contracted with an independent consulting firm, Henwood Energy Services, to evaluate information on cost and reliability of electric compressors. In light of this new information, the Final EIR concludes that the potential air quality and noise impacts associated with the compressor facility are not significant under CEQA, and that requiring electric motors for gas compression could affect the viability of the project. Therefore, the Final EIR does not adopt additional mitigation for this issue.

D. Other EIR Sections

As required by CEQA, the EIR also contains a section addressing the cumulative and growth-inducing impacts of the proposed project. For the most

part, the EIR determines that the project has very little potential for cumulatively considerable effects as defined by the CEQA Guidelines, mainly because most of the project's effects are temporary, and the long-term effects are either not additive to the effects of other projects or are so minor as to not be cumulatively considerable.

Pub. Res. Code § 21081.6 provides that when a public agency approves a project subject to implementing and monitoring measures, the agency must adopt a reporting or monitoring program for the changes made to the project or adopted conditions of project approval to mitigate or avoid significant effects on the environment. The purpose of the reporting or monitoring program is to ensure compliance during project implementation.

The EIR presents a draft mitigation monitoring and reporting framework for the mitigation measures proposed by LGS and incorporated into the project, and a mitigation and monitoring plan for the mitigation measures proposed for the Composite Route Alternative. Attachments C and D to this decision update those mitigation and monitoring plans with the changes made in the Final EIR.

The Final EIR responds to public agency and general comments to the Draft EIR, and includes a clarification of major issues, revisions to the Draft EIR, and a verbatim copy of comments to the Draft EIR and responses to each comment.

E. EIR Certification

The Commission must conclude that the EIR[19] is in compliance with CEQA before any final approval can be given to the application. This is to insure that the environmental document is a comprehensive, accurate, and unbiased tool to be used by the lead agency and other decisionmakers in addressing the merits of the project.

The EIR has been completed in compliance with CEQA. The EIR reflects the Commission's independent judgment and analysis on the issues addressed by the EIR, and the Commission has reviewed and considered the information in the EIR before issuing this decision on the project. We will certify the EIR.

10. Eminent Domain and SB 177

The issue of whether LGS should be granted the power of eminent domain is very controversial in this case. Several landowners in the evidentiary hearings, and numerous commentors at the public participation hearings, objected to a competitive service provider being granted the power of eminent domain. As stated above, we interpret the Public Utilities Code to provide that once LGS obtains a CPCN, it is a gas corporation which, according to Pub. Util. Code § 613, has the power of condemnation for property necessary for the construction and maintenance of its gas plant.

However, newly enacted legislation, SB 177, places conditions on the ability of certain public utilities to exercise the power of eminent domain for

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[19] As stated above, this decision defines the EIR as consisting of two separate documents, the Draft EIR and the Final EIR, which cumulatively make up the EIR.

purposes of providing competitive services.[20] For example, Section 3 of SB 177, which adds Section 625 to the Public Utilities Code, provides that "a public utility that offers competitive services may not condemn any property for the purpose of competing with another entity in the offering of those competitive services, unless the commission finds that such an action would serve the public interest, pursuant to a petition or complaint filed by the public utility..." (Section 625(a)(1)(A).) Section 625(e) further states that a public utility that does not comply with this section may not exercise the power of eminent domain.

A November 22, 1999 ALJ Ruling made tentative conclusions regarding the applicability of SB 177 to this proceeding, and requested parties' comments. The ALJ ruling stated that SB 177 expressly exempts certain public utilities from its coverage, but these exemptions do not appear to extend to a company like LGS.[21] SB 177 also limits the applicability of its requirements in other ways which do not apply to this application.[22]

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[20] On October 7, 1999, the Governor signed SB 177 into law. SB 177 became effective on January 1, 2000.

[21] According to Section 625(a)(4), these exceptions include a railroad corporation, a refined petroleum product common carrier pipeline corporation, and a water corporation, none of which describes LGS.

[22] For example, Section 625(a)(1)(B) says in part that the requirements set forth above do not apply to the condemnation of any property necessary solely for an electrical company or gas corporation to meet its "commission-ordered obligation to serve." This section further provides that "[p]roposed exercises of eminent domain by electrical or gas corporations that initially, or subsequently, acquire property for either commission-ordered electrical corporation obligation to serve and telecommunications services or gas corporation obligation to serve and telecommunications services are subject to paragraph (2) of subdivision (b)." Furthermore, certain utilities or their affiliates or subsidiaries are required to give notice, as specified, if they intend to install telecommunications equipment on property acquired by eminent domain. Again, these situations do not describe the instant application.

We do not define here all services which may be "competitive services" as opposed to those services provided pursuant to a "commission-ordered obligation to serve." However, because LGS' application concerns a competitive gas storage facility, and LGS requests exemptions from other statutory requirements because it plans to operate a competitive business which is not financed with ratepayer funds, we find that LGS' application concerns "competitive services" for purpose of SB 177, and that none of the other exemptions set forth in SB 177 apply to LGS.

We therefore agree with the ALJ's tentative conclusion that if LGS obtains a CPCN from this Commission, LGS would have to follow the mandates of § 625 before LGS could condemn any property for the approved project. This is so because if LGS obtains a CPCN from this Commission, it would be a public utility offering competitive gas storage services and any condemnation action it might initiate would not be filed until after January 1, 2000, the effective date of SB 177.

Therefore, we issue this CPCN on the condition that LGS shall follow the mandates of Pub. Util. Code § 625 before it exercises the power of eminent domain. That means that LGS should file a complaint which has been served on among other persons, the owner of the property to be condemned, and other affected interests. This complaint would initiate an adjudication hearing before the Commission. (The Commission staff has developed a document entitled "Information for Property Owners, Utilities, and the Public Regarding SB 177," which is attached to the EIR.)

According to SB 177, before the Commission could make a finding that LGS' proposed condemnation is in the public interest, LGS must show either that the proposed condemnation is necessary to provide service as a provider of last

resort to an unserved area, where there are no competing offers from facilities-based carriers to serve that area; or all of the following:

(a) The public interest and necessity require the proposed project;

(b) The property to be condemned is necessary for the proposed project;

(c) The public benefits of acquiring the property by eminent domain outweighs the hardship to the owners of the property;

(d) The proposed project is located in a manner most compatible with the greatest public good and least private injury. (See § 625(b)(2).)

In their briefs, the parties are in general agreement that if the Commission grants LGS a CPCN, that LGS would have to comply with § 625(b)(2) of SB 177. The parties differ on the details of such implementation. For example, LGS agreed that the ALJ's tentative conclusions set out in the November ruling (that LGS would have to comply with SB 177 if the Commission granted LGS a CPCN) were correct. Wild Goose believes that in order to ensure an efficient process, with no undue delay, LGS should file a petition to comply with SB 177 during the pendency of the CPCN process. The Farm Bureau appears to argue that LGS must satisfy SB 177's requirements before this Commission can act upon the instant CPCN application. Other parties raise the issue of the conclusory effect of findings made in this decision upon the SB 177 issues.

By enacting SB 177, the Legislature placed conditions on the ability of certain public utilities to exercise the power of eminent domain for the purposes of providing competitive services. However, in this case, the proceedings called for by SB 177 are separate proceedings (i.e. a complaint and an adjudicatory hearing) from the instant CPCN proceeding. Moreover, LGS could not initiate an action pursuant to SB 177 prior to Commission approval of its application because it is not yet a public utility. We do not make findings on the SB 177 criteria at this time but rather will do so, if and when LGS commences a proceeding according to the mandates of SB 177. Similar issues with respect to

the weight certain findings in this decision would have, if any, in a subsequent proceeding would be addressed in the subsequent proceeding.

However, we make several general comments on this statute because of the importance of this issue to the Lodi community. We note, for instance, that the scope of the showing to meet complainant's burden of proof concerning the findings of "necessity" or "necessary" may not be the same as that burden in this CPCN proceeding, given that the Gas Storage Decision permits a presumptive showing of need. As stated above, the scope of the need showing required to meet a complainant's burden of proving "necessity" or "necessary" as set forth in § 625 is an open issue.

Also, we note that the language of § 625 gives the Commission the discretion to permit a complainant to exercise the power of eminent domain if it meets its burden of proof as to certain issues. Section 625 (b) states that the "commission *may* make a finding pursuant to subdivision (a) if, in the determination of the commission, either of the following conditions are met...." We interpret § 625 to mean what it says, namely, that the Commission has the discretion whether or not to permit a complainant to exercise the power of eminent domain. Furthermore, the Commission is not required to authorize the use of eminent domain where the complainant makes one of the alternative showings.

The Williams argue that in order for landowners to effectively participate in SB 177 proceedings, they should be compensated for their reasonable costs of participation, including attorneys fees. We do not resolve this issue here, because the issue of whether a party qualifies for intervenor compensation in this circumstance should be addressed in the specific proceeding in which the party is appearing (i.e., the complaint proceeding). The Commission's informational document, cited above, also contains a section on intervenor compensation.

We also more clearly define the scope of LGS' condemnation authority granted pursuant to this CPCN. In its application, LGS explains that only the storage rights, and not the mineral rights, are required for the project because the right to store natural gas in a depleted or non-gas bearing reservoir on a property is not a mineral right. Rather, it is part of the rights of a surface owner unless this right has been specifically severed in a deed or other conveyance. However, LGS is seeking either the mineral rights to the property or consent and agreement of the mineral owners, in some instance limited to the specific zones to be utilized for natural gas storage. According to LGS, this is being done to: (1) preclude another owner of the mineral rights from drilling into or through the storage reservoirs and causing damage or recovering the stored gas; and (2) preclude claims that there exist remaining recoverable gas reserves in the storage reserves prior to injection of new gas.

While we have no objection to LGS acquiring the mineral interests from landowners voluntarily willing to sell them, we do not believe that LGS should obtain the power of condemnation with respect to the mineral interests because according to LGS, only the storage interests are required for the project. We therefore clarify the scope of the project authorized by the CPCN to include only the storage, and not mineral interests in the gas storage field.

Finally, we note that the CPCN that LGS is given by this decision is limited to specific facilities. Therefore, this decision does not provide LGS any basis for condemning property for any other project or facilities.

11. Other Issues

The scoping memo left open the issue of whether to hold further hearings on this application after the issuance of the Final EIR. The hearings would not be on the Final EIR, which does not require hearings, but rather, on issues raised in the non-environmental portion of the case that might need to be addressed

further in light of any changes to the proposed project made in the EIR. We do not believe that the EIR contains the type of changes that require further hearings.

An issue also exists as to whether LGS should be exempt from compliance with the Commission's Affiliate Transaction Rules. Pursuant to D.99-09-002, the Commission has modified the Affiliate Transaction Rules so that the utilities which were respondents to that proceeding, and any other utilities which the Commission subsequently designates, should be subject to the Affiliate Transaction Rules. D.99-09-002 did not require Wild Goose to comply with the Affiliate Transaction Rules at this time because, among other reasons, Wild Goose was not a respondent to the Affiliate Transaction proceeding (Rulemaking 97-04-011/Investigation 97-04-012), and did not possess market power in the California gas storage market or the ability to cross-subsidize Wild Goose's affiliates with ratepayer assets.

Although no party raises the issue of whether LGS should be subject to the Affiliate Transaction Rules, because LGS was also not a respondent to the Affiliate Transaction proceeding, and it does not possess market power in the California gas storage market or the ability to cross-subsidize LGS' affiliates with ratepayer assets at this time, we do not now apply the Affiliate Transaction Rules to LGS.

However, Decision 97-12-088, *slip op.* at p. 87, provides for review of the Affiliate Transaction Rules not later than December 31, 2000, and sooner if conditions warrant. LGS is put on notice that we intend the respondents in that proceeding to be all electric and gas utilities within our jurisdiction (including LGS), and the burden will be on the responding utilities to justify limited or partial exemption from the Affiliate Transaction Rules.

In conclusion, when considering the need for and the benefits of competitive gas storage facilities in California, as well as the criteria set forth in Pub. Util. Code § 1002, and the outcome of the EIR, we exercise our discretion and approve LGS' application for a CPCN as further defined and conditioned in this decision.

We clarify that the reason we do not close the proceeding because the Commission has yet to affirm or reject the ALJ's July 16, 1999 ruling denying the William's notice of intent to claim compensation.

12. Comments on the Proposed Alternate Decision

Pursuant to Pub. Util. Code §311(e) and Rule 77.6 of the Commission's Rules of Practice and Procedure, the proposed alternate decision of Commissioner Lynch and Commissioner Duque was mailed to the parties on May 4, 2000. The following parties filed opening or reply comments: LGS, Mike and Tammy Blakely, Calpine, Farm Bureau, District Council No. 36, Wild Goose and the Williams.

We affirm the proposed alternate decision, but make the following changes. Additionally, we have made changes to the proposed alternate decision to improve the discussion, add references to the record, and correct typographical errors.

- We adjust the amount of the required surety or performance bond to $20 million.
- We omit Finding of Fact 20 and Conclusion of Law 1 in the proposed alternate decision (which finding and conclusion addressed or affirmed the ALJ's July 16, 1999 ruling denying the Williams' notice of intent to claim compensation, to conform the findings and conclusions with the text of the proposed alternate, which was silent on, and thus did not

rule on this issue. The changes also clarify why we do not close the proceeding in this decision.

- We changed the effective date to make the decision effective immediately.

Findings of Fact

1. The natural gas industry underwent considerable change in the 1980s and 1990s, with major policy changes occurring at both the federal and state level.

2. Several years ago, the Commission approved a CPCN for the first competitive gas storage facility, the Wild Goose facility in Butte County, to operate. The instant application is the second application for a CPCN to offer competitive gas storage services to be considered by the Commission.

3. LGS is a wholly-owned subsidiary of Western Hub Properties, LLC (WHP). Haddington Ventures, LLC (Haddington) formed WHP in 1998 to develop natural gas facilities, primarily in the western United States and Canada. WHP is presently owned by two limited partnerships, Haddington Energy Partners, L.P. and Haddington/Chase Energy Partners (WHP), L.P., respectively.

4. In the mid-1980s, and before forming Haddington Ventures, LLC, the three Haddington principals, Larry Bickle, John Strom and Chris Jones, formed and managed Tejas Power Corporation, which later became TPC Corporation (TPC). TPC was sold to PacifiCorp in the spring of 1997.

5. The LGS project management team, Mssrs. Dill (LGS' President) and Bergquist (a WHP Vice President) have substantial experience in the natural gas industry, including gas storage.

6. The Commission, through the Energy Division, determined that an EIR was required under CEQA, and caused a Draft and Final EIR to be prepared.

7. The final EIR consists of two separate documents, the Draft EIR and the Final EIR, which cumulatively make up the EIR, and are identified on the record as Reference No. 2.

8. Lodi Gas proposes to convert a depleted natural gas production field into a storage facility. The field LGS has chosen comprises about 1,450 acres, and is located approximately 5.4 miles, northeast of Lodi in San Joaquin County. For purposes of evaluating the project under CEQA, the "proposed project" identified in the EIR is the project formally presented in LGS' application as modified by the three amendments to the application and LGS' proposed mitigation measures. The EIR assumes that LGS will meet all the construction specifications and will complete all mitigation measures.

9. The project has the following principal components: the Lodi gas field, a field collection and water separation facility, a gas dehydration and compressor facility, approximately 33 miles of field and transmission gas pipeline, and two PG&E interconnect and meter stations.

10. Only the storage rights, and not the mineral rights, are required for the project. However, LGS is also seeking either the mineral rights to the property or consent and agreement of the mineral owners, in some instance limited to the specific zones to be utilized for natural gas storage. According to LGS, this is being done for two purposes: (1) to preclude another owner of the mineral rights from drilling into or through the storage reservoirs and causing damage or recovering the stored gas; and (2) to preclude claims that there exist remaining recoverable gas reserves in the storage reserves prior to injection of new gas.

11. LGS describes its own system capability as offering both firm and interruptible storage services and designed to accommodate an inventory of 12 Bcf of working gas, with a maximum firm deliverability of 500 MMcf/d and a maximum firm injection capability of 400 MMcf/d. This is part of LGS' project

description and does not refer to PG&E's ability to transport gas to and from LGS.

12. LGS filed its initial application on November 5, 1998. Subsequently, LGS filed three amendments to the application, dated January 22, February 5, and April 29, 1999, respectively.

13. A January 7, 1999 ALJ ruling, *inter alia*, required LGS to serve a notice of availability of its application and the ruling on all owners of land, under, or on which the project may be located, and owners of land adjacent thereto. Because the third amendment to the application presented an alternative siting of the compressor station, LGS was also required to undertake similar service requirements as set forth above on landowners affected by the third amendment to the application.

14. Pursuant to Pub. Util. Code § 1701.3, the scoping memo designated ALJ Econome as the principal hearing officer.

15. Hearings on the non-environmental issues were held from June 14 through 16, 1999.

16. The parties presented closing argument before Assigned Commissioner Bilas, as well as the ALJ, on June 22, 1999.

17. The Commission held two public participation hearings in Lodi on October 19, 1999, where the public could comment on both the non-environmental issues and the Draft EIR.

18. Pursuant to Rule 8(d), parties were given until June 30, 1999, to submit a written request for final oral argument before the entire Commission. A July 16, 1999 ALJ ruling confirmed that no party submitted such a request, and that such argument would therefore not be scheduled or heard.

19. Altogether, the Commission held six days of hearings in this case (including the prehearing conference). Assigned Commissioner Bilas was present for three of those days.

20. On February 17, 1999, the Commission, through its Energy Division, notified LGS that its application had been deemed complete for purposes of Rule 17.1.

21. The Commission issued the Draft EIR in September 1999.

22. The Commission issued its Final EIR on February 15, 2000.

23. Two different regulatory schemes define this Commission's responsibilities in reviewing LGS' request for the approval of this application. Pub. Util. Code §§ 1001 *et seq.*, require that before LGS can construct this project, the Commission must grant a CPCN on the grounds that the present or future public convenience and necessity require or will require construction of the project. Pub. Res. Code §§ 21000 *et seq.* (CEQA) require that the Commission, as lead agency for this project, prepare an EIR assessing the environmental implications of the project for its use in considering the request for a CPCN.

24. In 1992, the California Legislature formally expressed its objective of creating competition for natural gas storage services. The Legislature passed and the Governor approved AB 2744 (Chapter 1337 of the California Statutes of 1992, which is uncodified), which made certain findings about gas storage and urged certain action by the Commission. The Commission has summarized AB 2744 as not requiring, but urging, Commission action in the gas storage area.

25. In the 1993 Gas Storage Decision, the Commission adopted a "let the market decide" policy for gas storage. The Commission stated that it should not test the need for new gas storage projects on a resource planning basis, so long as all of the risk of the unused new capacity resides with the builders and users of the new facility.

26. In the Gas Storage Decision, the Commission stated that its "let the market decide" policy was consistent with Pub. Util. Code §§ 451 and 1001. However, the Commission also recognized that it was not abandoning regulation of gas storage, and that CPCNs were still necessary to the extent required by law.

27. Both the Commission and the Legislature have found the need for competitive gas storage facilities. LGS and Calpine reiterate and elaborate on the rationale underlying this need.

28. The benefits of competitive gas storage in California include (a) increased reliability; (b) increased availability of storage in California; (c) the potential for reduced energy price volatility; and (d) the potential for reduced need for new gas transmission facilities.

29. Under Pub. Util. Code § 1002, the Commission must consider the following factors in determining whether to grant a CPCN: (1) Community values; (2) Recreational and park areas; (3) Historical and aesthetic values; and (4) Influence on the environment. The obligation to consider the factors listed in § 1002 is independent of the Commission's obligation under CEQA. In addition to its CEQA obligations, Pub. Util. Code § 1002 provides the Commission with responsibility independent of CEQA to include environmental influence and community values in the Commission's consideration of a request for a CPCN.

30. In addressing whether the proposed project is compatible with community values, as set forth in Pub. Util. Code § 1002, we give considerable weight to the views of the local community. In addition, we acknowledge the positions of the elected representatives in the area because we believe they are also speaking on behalf of their constituents.

31. We cannot conclude based upon this record that it is reasonable that the existence of this project in close vicinity with the area's emerging wine tourism will damage the public's perception of the area's winegrape growing reputation.

32. Many of the impacts of the project are shorter-term construction-related. The EIR concludes that all but one can be mitigated to less than significant levels. The EIR also states that all of the project's long-term impacts can be mitigated to less than significant levels.

33. The Lodi community is divided about the project.

34. We cannot totally mitigate the community concerns to the level that we can find that this project is compatible with community values.

35. The community concerns can to some extent be mitigated if it is clear that LGS will have adequate liability insurance as well as a bond to ensure that LGS meets its project obligations.

36. The interconnection agreement between LGS and PG&E, attached to this decision as Attachment E, is reasonable for this proceeding.

37. There is no evidence that LGS currently possesses significant market power in the California gas storage market.

38. For the preferred alternative (the Composite Route Alternative), as well as the other alternatives, the EIR requires that the Commission make a statement of overriding consideration with respect to one significant and unavoidable impact identified in the EIR, construction-related ROG and NOx emissions in Sacramento County.

39. The EIR includes a detailed analysis of three alternative pipeline routes, which are technically feasible and acceptable to LGS, and were developed in response to public concerns during the scoping process regarding disruption of agriculture production and consistency with county and Delta Protection Commission policies regarding the consolidation of gas pipelines into transmission corridors.

40. The EIR determines that the Composite Route Alternative is the preferred alternative, largely because it has one less significant and unavoidable environmental impact than does the proposed project.

41. The EIR states that although use of the existing public right-of-way alternative may be preferable in some areas, in other areas this alternative route may run closer to residences than the original planned route.

42. East of Highway 5, the Existing Pipeline Corridor has greater impacts on private landowners because it does not follow the existing rights-of-way, as does the preferred alternative through most of that portion of the route.

43. LGS has stated that the Composite Route Alternative is now its preferred route and includes its preferred compressor facility location.

44. The EIR analyzes the environmental impacts, mitigation measures, and significance after mitigation under the following categories: (1) land use, planning, and agricultural resources; (2) population and housing; (3) geology, soil, and paleontology; (4) hydrology; (5) air quality; (6) transportation and circulation; (7) biological resources; (8) energy and mineral resources; (9) public health and safety; (10) noise; (11) public services and socioeconomics; (12) visual resources; and (13) cultural resources. The EIR determines that under its preferred alternative, all significant environmental impacts except one can be mitigated to a less than significant level. The EIR discusses the potential environmental impacts at a project-wide level, but does not consider the project's impacts on specific individual landowners.

45. The EIR identifies many of the project's potential significant effects that can be avoided or mitigated to a less than significant level. The EIR describes measures to avoid or mitigate such effects.

46. The Plans set forth in Attachments C and D to this decision substantially conform to the recommendations in the EIR for measures required to avoid or

mitigate significant environmental effects of the project that can be avoided or mitigated.

47. The EIR has been completed in compliance with CEQA.

48. The EIR reflects the Commission's independent judgment and analysis on the issues addressed in the EIR, and the Commission has reviewed and considered the information in the EIR before issuing this decision on the project.

49. By enacting SB 177, the Legislature placed conditions on the ability of certain public utilities to exercise the power of eminent domain for purposes of offering competitive services.

Conclusions of Law

1. The July 20, 1999 motion of the Building and Construction Trades Council of San Joaquin, Calaveras, Alpine and Amador Counties for leave to withdraw as a party and for their lawfirm to enter an appearance for District Council No. 36 should be granted.

2. Pacific Realty's March 24, 2000 motion to withdraw from this proceeding should be denied because it was filed after the Commission has expended much time and resources on this proceeding. However, the Commission will consider the facts that Pacific Realty has settled its differences with LGS and now supports the application as supplementing its original testimony.

3. The EIR, which consists of two separate documents, the Draft EIR and the Final EIR, should be certified.

4. Because CPCNs are still necessary to the extent required by law, LGS' application must still comply with, *inter alia*, Pub. Util. Code § 1002. Also, if LGS only relies on the Gas Storage Decision for a presumptive showing of need, it may be difficult for the Commission to determine whether or not there is evidence to support a finding of overriding consideration, if necessary, with respect to the EIR that CEQA requires in this case.

5. The record has established a general need for competitive gas storage services in California.

6. The community concerns can to some extent be mitigated so that, in balancing community values with the other criteria set forth in Pub. Util. Code § 1002, the general need for and benefits of competitive gas storage facilities in California, and the outcome of the EIR, we can approve the project as conditioned herein.

7. As a condition to the CPCN, before construction begins until one year following the termination of the project operations, LGS should maintain a general liability policy of $1 million, as well as an umbrella policy in the amount of $50 million per occurrence. Furthermore, LGS should also provide a surety or performance bond in the amount of $20 million to cover the costs of meeting its obligations under this CPCN. These costs include, but are not limited to, reburial of the pipeline in the event of subsidence of the soil covering the pipeline, costs of restoring the area in the event of abandonment or bankruptcy, etc. The surety or performance bond should remain in effect until one year following the termination of project operations.

8. LGS should not begin construction on any aspect of the project until LGS first obtains: (1) a determination from the Airport Land Use Commission that the project is consistent with the local land use plan, or if not, until LGS has obtained an amendment to the plan to allow the project; and (2) all necessary permits from the California State Lands Commission.

9. The Commission's Energy Division should continue its outreach efforts during the construction phase of the project such as sending periodic newsletters to those persons served with notices regarding the EIR, and posting the monitoring reports on the Commission's web page at frequent intervals. To the extent that Energy Division requires a reasonable extension of the time stated in

the EIR to conduct its review and monitoring activities, it has the authority to reasonably extend this period of time.

10. The interconnection agreement between LGS and PG&E, attached to this decision as Attachment E, should be approved.

11. Classification of standard and special facilities, and the principles of cost allocation for future interconnections, should be determined on a case-by-case basis. LGS should provide the Commission, in a supplemental filing, the final total cost of the interconnection including the cost paid by each entity.

12. LGS and PG&E should be required to have an operating and balancing agreement in place before LGS commences its operations. LGS should file this agreement with the Commission's Energy Division and serve it on all the parties to this proceeding.

13. LGS should be allowed to have market-based pricing because there is no evidence that LGS has significant market power.

14. LGS should not be required to cost justify its proposed rate ceilings or floors and should be allowed to charge market based rates within a filed rate zone.

15. LGS should file tariff rates within a rate window, but without cost justification.

16. Because LGS' rates should be market-based, ratepayers are not financing this project, and we do not have concerns regarding cross-subsidization by ratepayers, we should waive the cost cap requirement of Pub. Util. Code § 1005.5 for this application.

17. For purposes of evaluating the project under CEQA, the "proposed project" identified in the EIR is the project formally presented in LGS' application as modified by the three amendments to the application and LGS'

proposed mitigation measures. The EIR assumes, and LGS should, meet all the construction specifications and complete all mitigation measures.

18. LGS should use the Composite Route Alternative for its pipeline route, which is the EIR's preferred alternative.

19. The EIR is based on the assumption that, and LGS should, operate its facilities within the parameters of the required permits, and that operations in excess of permitted levels should require LGS to obtain new discretionary permits and additional environmental review.

20. According to the EIR, one effect of the project, construction-related ROG and NOx emissions in Sacramento County, cannot be mitigated to a less than significant level and requires a statement of overriding consideration for the Commission to approve the project. This is one small issue in a project of this complexity, and addresses an geographic area other than that which was the focus of project opposition by the community. The EIR also recommends a best maintenance practice to address this issue. Because the statewide benefits of competitive gas storage facilities outweigh this one construction-related environmental impact of the project that cannot be mitigated to a less than significant level, we adopt a statement of overriding consideration on this one issue.

21. When considering the need for and the benefits of competitive gas storage facilities in California, as well as the criteria set forth in Pub. Util. Code § 1002, and the outcome of the EIR, we exercise our discretion and should approve LGS' application for a CPCN as further defined and conditioned in this decision.

22. With respect to each significant impact of the project that the EIR identifies as a significant impact that can be reduced to a level that is not significant, the mitigation, changes, or alterations should be required in, or incorporated into,

the project to mitigate or avoid the significant impacts on the environment as a condition of this CPCN.

23. With respect to those changes or alterations identified in the immediately preceding Conclusion of Law that are within the responsibility and jurisdiction of another public agency, each such change or alteration has been, or can and should be adopted by that other agency.

24. With respect to any necessary state or local discretionary permits which LGS must obtain in order to construct the project, we clarify that the discretionary decision as to whether or not, or pursuant to what conditions, to issue the permits is at the sole discretion of the state or local entity.

25. The Draft Mitigation Monitoring Plan – Composite Route Alternative and the Draft Mitigation Monitoring Plan – Mitigation Measures Proposed by the Applicant, set forth in Attachments C and D to this decision, should be adopted in satisfaction of the requirements of Pub. Res. Code § 21081.6.

26. The Executive Director, or his designated staff or outside staff representative, should supervise and oversee construction of the project insofar as it relates to monitoring and enforcement of the mitigation conditions set forth in Attachments C and D to this decision.

27. The CPCN granted herein should be conditioned upon the adoption and implementation of the environmental mitigation measures set forth in the EIR and summarized in Attachments C and D to this decision.

28. If LGS makes any changes to the proposed route or other project components, LGS shall apply to the Executive Director or his designated staff for approval of a variance.

29. LGS should reimburse the Commission for the amount expended by the Commission for its expenses, including but not limited to special studies, staff, or

Commission staff costs (including allocable indirect costs) directly attributable to in connection with mitigation monitoring.

30. In monitoring the implementation of the environmental mitigation measures described in the EIR and summarized in Attachments C and D to this decision, the Executive Director should attribute the acts and omissions of LGS' employees, contractors, subcontractors, or other agents to LGS.

31. LGS should follow the mandates of Pub. Util. Code § 625 before it exercises the power of eminent domain pursuant to Pub. Util. Code § 613.

32. The property required for LGS to construct and operate this project includes the storage, but not the mineral interests in the gas storage filed Therefore, LGS' power of condemnation includes the storage, but not the mineral interests in the gas storage field.

33. Decision 97-12-088, *slip op.* at p. 87, provides for review of the Affiliate Transaction Rules not later than December 31, 2000, and sooner if conditions warrant. LGS is put on notice that we intend the respondents in that proceeding to be all electric and gas utilities within our jurisdiction (including LGS), and the burden will be on the responding utilities to justify limited or partial exemption from the Affiliate Transaction Rules.

34. LGS' application for a CPCN authorizing it only to develop, construct, and operate the underground natural gas storage facility and ancillary pipeline, as set forth in its application and the Environmental Impact Report (EIR), with the pipeline routed along the Composite Route Alternative identified in the EIR as the preferred alternative, and to provide firm and interruptible storage services at market based rates, should be granted subject to the terms and conditions set in this decision.

ORDER

IT IS ORDERED that:

1. The Environmental Impact Report (EIR), which consists of two separate documents, the Draft EIR and the Final EIR, shall be certified.

2. Lodi Gas Storage, LLC (LGS) is granted a certificate of public convenience and necessity (CPCN) authorizing it to develop, construct, and operate the underground natural gas storage facility and ancillary pipeline, as set forth in its application, with the pipeline routed along the Composite Route Alternative identified in the EIR as the preferred alternative, and to provide firm and interruptible storage services at market based rates (the Project), subject to the terms and conditions set forth below.

3. Within 60 days of the effective date of this order, LGS shall file a written acceptance of the CPCN granted in this proceeding.

4. Before commencing its service to customers, LGS shall file with this Commission an advice letter and accompanying tariff schedules which will meet the criteria set forth in this decision, (i.e., LGS shall set forth proposed rate ceilings or floors and shall be allowed to charge market based rates within a filed rate zone), and which will comply with the criteria of the Commission's General Order 96-A, and other applicable Commission rules and procedures.

5. As a condition to the CPCN, before construction begins until one year following the termination of the Project operations, LGS shall maintain a general liability policy of $1 million, as well as an umbrella policy in the amount of $50 million per occurrence. Furthermore, LGS shall also provide a surety or performance bond in the amount of $20 million to cover the costs of meeting its obligations under this CPCN. These costs include, but are not limited to, reburial of the pipeline in the event of subsidence of the soil covering the pipeline, costs of restoring the area in the event of abandonment or bankruptcy, etc. The surety

or performance bond shall remain in effect until one year following the termination of Project operations.

6. LGS shall not begin construction of any aspect on the project until LGS first obtains: (1) a determination from the Airport Land Use Commission that the project is consistent with the local land use plan, or if not, until LGS has obtained an amendment to the plan to allow the project; and (2) all necessary permits from the California State Lands Commission.

7. The Commission's Energy Division shall continue outreach efforts during the construction phase of the project such as sending periodic newsletters to those persons served with notices regarding the EIR, and posting the monitoring reports on the Commission's web page at frequent intervals. To the extent that Energy Division requires a reasonable extension of the time stated in the EIR to conduct its review and monitoring activities, it shall have the authority to reasonably extend this period of time.

8. The interconnection agreement between LGS and PG&E, attached to this decision as Attachment E, is approved. This approval is granted only for this facility. Before commencing its operations, LGS shall provide the Director of the Energy Division, in a supplemental filing, the final total cost of the interconnection including the share of the cost paid by each entity.

9. LGS and PG&E should be required to have an operating and balancing agreement in place before LGS commences its operations. LGS should file this agreement with the Commission's Energy Division and serve it on all the parties to this proceeding.

10. We adopt a statement of overriding consideration for one effect of the Project, the construction-related ROG and NOx emissions in Sacramento County, which cannot be mitigated to a less than significant level because the statewide

benefits of competitive gas storage facilities outweigh this one construction-related environmental impact.

11. With respect to each significant impact of the project that the EIR identifies as a significant impact that can be reduced to a level that is not significant, the mitigation, changes, or alterations shall be required in, or incorporated into, the project to mitigate or avoid the significant impacts on the environment as a condition of this CPCN.

12. With respect to those changes or alterations identified in the immediately preceding Ordering Paragraph that are within the responsibility and jurisdiction of another public agency, each such change or alteration has been, or can and should be adopted by that other agency.

13. The Draft Mitigation Monitoring Plan – Composite Route Alternative and the Draft Mitigation Monitoring Plan – Mitigation Measures Proposed by the Applicant, set forth in Attachments C and D to this decision, shall be adopted in satisfaction of the requirements of Pub. Res. Code § 21081.6.

14. The CPCN granted herein shall be conditioned upon the adoption and implementation of the environmental mitigation measures set forth in the EIR and summarized in Attachments C and D to this decision, and LGS shall fully implement these mitigation measures.

15. The EIR is based on the assumption that, and LGS shall, operate its facilities within the parameters of the required permits, and that operations in excess of permitted levels will require LGS to obtain new discretionary permits and additional environmental review.

16. The Executive Director, or his designated staff or outside staff representative, shall supervise and oversee construction of the Project insofar as it relates to monitoring and enforcement of the mitigation conditions set forth in the EIR and as summarized in Attachments C and D to this decision. The

Executive Director shall track and record direct expenses and time devoted to ascertain the costs of the monitoring mitigation measures to the Commission. The Executive Director is authorized to employ staff independent of the Commission staff to carry out such functions, including, without limitation, the on-site environmental inspection, environmental monitoring, and environmental mitigation supervision of the construction of the Project. Such staff may be individually qualified professional environmental monitors or may be employed by one or more firms or organizations. No person or organization shall be so employed who beneficially owns any security of, or has received during the past five years or is presently entitled to receive at any time in the future more than a de minimis amount of compensation for consulting services from LGS, or Western Hub Properties, LLC, Haddington Energy Partners, L.P., and Haddington/Chase Energy Partners, L.P.

17. In monitoring the implementation of the environmental mitigation measures described in the EIR and summarized in Attachments C and D to this decision, the Executive Director should attribute the acts and omissions of LGS' employees, contractors, subcontractors, or other agents to LGS. LGS shall comply with all orders and directives of the Executive Director concerning implementation of the environmental mitigation measures described in the EIR and summarized in Attachments C and D to this decision.

18. The Executive Director shall not authorize LGS to commence actual construction of the Project until LGS has entered into a cost reimbursement agreement with the Commission for the recovery from LGS of the costs of the mitigation monitoring program described in Attachments C and D to this decision, including but not limited to special studies, staff, or Commission staff costs (including allocable indirect costs) directly attributable to mitigation monitoring. The Executive Director is authorized to enter into an agreement

with LGS that provides for such reimbursement on terms and conditions consistent with this decision in form satisfactory to the Executive Director. The Executive Director shall evidence his approval of such agreement by his Resolution. The terms and conditions of such agreement shall be deemed conditions of approval of the application to the same extent as if they were set forth in full in this decision.

19. Disputes concerning directives of the Executive Director to LGS during the course of actual construction of the Project shall be determined by the Executive Director, as evidenced by his Resolution. Any person aggrieved by any such Resolution may appeal to the Commission, pursuant to Rule 9(a) of the Commission's Rules of Practice and Procedure. The Executive Director's Resolution shall remain in full force and effect until affirmed, modified or vacated by the Commission.

20. The Executive Director shall file a Notice of Determination for the Project as required by the California Environmental Quality Act and the regulations promulgated pursuant thereto.

21. If LGS makes any changes to the proposed route or other project components, LGS shall apply to the Executive Director or his designated staff for approval of a variance.

22. If LGS seeks to expand or modify its physical facilities to the extent that discretionary approval by a public agency is required, it shall consult with the Commission prior to filing an application for such approval, so that the Commission may ensure that the appropriate environmental analysis of the impacts of LGS' specific proposal may be performed.

23. LGS shall follow the mandates of Public Utilities Code Section 625 before it exercises the power of eminent domain for this Project pursuant to Public Utilities Code Section 613.

24. Because the property required for LGS to construct and operate this Project includes the storage, but not the mineral interests in the gas storage field, LGS' power of condemnation shall include the storage, but not the mineral interests in the gas storage field.

25. Decision 97-12-088, *slip op.* at p. 87, provides for review of the Affiliate Transaction Rules not later than December 31, 2000, and sooner if conditions warrant. LGS is put on notice that we intend the respondents in that proceeding to be all electric and gas utilities within our jurisdiction (including LGS), and the burden will be on the responding utilities to justify limited or partial exemption from the Rules.

26. The July 20, 1999 motion of the Building and Construction Trades Council of San Joaquin, Calaveras, Alpine and Amador Counties for leave to withdraw as a party and for their lawfirm to enter an appearance for District Council No. 36 is granted.

27. Pacific Realty's March 24, 2000 motion to withdraw from this proceeding is denied. However, the Commission will consider the facts that Pacific Realty has settled its differences with LGS and now supports the application as supplementing its original testimony.

This order becomes effective 30 days from today.

Dated May 18, 1999, at San Francisco, California.

LORETTA M. LYNCH
President
HENRY M. DUQUE
JOSIAH L. NEEPER
RICHARD A. BILAS
CARL W. WOOD
Commissioners

ATTACHMENT A

(3 pages)

************ SERVICE LIST ************

Last updated on 18-JAN-2000 by: ACB

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**************** APPEARANCES ****************

Lizanne Reynolds
Attorney At Law
ADAMS BROADWELL JOSEPH & CARDOZO
651 GATEWAY BLVD. STE. 900
SOUTH SAN FRANCISCO CA 94080
(650) 589-1660
lr@adamsbroadwell.com
For: Bldg & Construction Trades Council, San Joaquin, Calaveras, Alpine, & Amador Counties

Mike Blakely
TAMMY BLAKELY
7250 EAST JAHANT ROAD
ACAMPO CA 95220-9629
(209) 334-3602
103356.2652@compuserve.com
For: Mike and Tammy Blakely

onald Liebert
ttorney At Law
ALIFORNIA FARM BUREAU FEDERATION
300 RIVER PLAZA DRIVE
ACRAMENTO CA 95833
561-5657
ert@cfbf.com
CALIFORNIA FARM BUREAU FEDERATION and SAN JAQUIN FARM BUREAU FEDERATION

teven F. Greenwald
INDSEY HOW-DOWNING/JOSEPH R. SWIMMER
ttorney At Law
AVIS WRIGHT TREMAINE
JE EMBARCADERO CENTER, SUITE 600
N FRANCISCO CA 94111
15) 276-6500
ndseyhowdowning@dwt.com
r: Calpine Corporation

an Mercado
PARTMENT OF WATER RESOURCES
VISION OF LAND AND RIGHT OF WAY
16 NINTH ST.
CRAMENTO CA 95814
16) 653-5620

L. Carroll
L. TROWBRIDGE, PHILIP A. STOHR
orney At Law
NEY, BRAND, SEYMOUR & ROHWER
CAPITOL MALL, 10TH FLOOR
RAMENTO CA 95814
6) 441-0131
ll@dbsr.com
di Gas Storage, LLC

uel C. Estrada
TTA ESTRADA
2 E. JAHANT ROAD
MPO CA 95220
9) 334-1195

Jeanne M. Bennett
MICHAEL DAY
Attorney At Law
GOODIN MACBRIDE SQUERI RITCHIE & DAY LLP
505 SANSOME STREET, SUITE 900
SAN FRANCISCO CA 94111
(415) 392-7900
jbennett@gmssr.com
For: Wild Goose Storage, Inc.

Patrick L. Gileau
Legal Division
RM. 5000
505 VAN NESS AVE
SAN FRANCISCO CA 94102
(415) 703-3080
plg@cpuc.ca.gov
For: Office of Ratepayer Advocates

Karna E. Harrigfeld
HERUM CRABTREE BROWN DYER ZOLEZZI TERPST
2291 W. MARCH LANE, STE B 100
STOCKTON CA 92507
(209) 472-7700
KHARRIGFELD@HERUMCRABTREE.COM
For: TODD AND MAUREEN WILLIAMS

D. Stephen Schwabauer
Attorney At Law
HERUM CRABTREE DYER ZOLEZZI & TERPSTRA
2291 W. MARCH LANE, SUITE B100
STOCKTON CA 95207
(209) 472-7700
For: David&Mary Perry/PerryFamTrust/Reba Turnbull/TurnbullFamTrust/GamblinFamTrust,1989/T. & M. Willi

Garry Hubert
HUBERT, YASUTAKE & HOH
221 MAIN STREET, STE 1300
SAN FRANCISCO CA 94105
(415) 543-6212
For: Edwin L. and Lillian Remick, Jr.

Edward W. O'Neill
Attorney At Law
JEFFER MANGELS BUTLER & MARMARO LLP
ONE SANSOME STREET, 12TH FLOOR
SAN FRANCISCO CA 94104
(415) 392-8080
ewo@jmbm.com
For: El Paso Natural Gas

John Zonino
JOHN ZONINO FARMS
4240 E. ACAMPO ROAD
ACAMPO CA 95220
(209) 365-6060
For: Self

********** SERVICE LIST **********

David W. Anderson
Attorney At Law
CIFIC GAS AND ELECTRIC COMPANY
BOX 7442
FRANCISCO CA 94120
(415) 973-6659
dwa3@pge.com
For: Pacific Gas and Electric Company

Joe Petersen
PETERSEN VINEYARDS
25030 NORTH BRUELLA
ACAMPO CA 95220
(209) 367-3975
joe@lodiirrigation.com
For: Self/Marian Mohr-Fry/Curtiss Gillespie/Alex Delu Jr./Gladys Shinn/Stanton Lange/et al.

Robert B. Gex
Attorney At Law
PILLSBURY MADISON & SUTRO LLP
PO BOX 7880
SAN FRANCISCO CA 94120-7880
(415) 983-1000
gex_rb@pillsburylaw.com
For: Pacific Realty Associates

Andrew Mastin
Attorney At Law
PILLSBURY, MADISON & SUTRO, LLP
PO BOX 7880
RANCISCO CA 94120-7880
983-1000
in_ad@pillsburylaw.com
For: PACIFIC REALTY ASSOCIATES, L.P.

len J. Sullivan
ttorney At Law
EMPRA ENERGY
01 ASH SREET
AN DIEGO CA 92101
619) 699-5162
sullivan@sempra.com
or: Southern California Gas Company

ichel Peter Florio
ttorney At Law
HE UTILITY REFORM NETWORK
11 VAN NESS AVE., SUITE 350
AN FRANCISCO CA 94102
415) 929-8876 (302)
florio@turn.org
or: The Utility Reform Network (TURN)

rri M. Dickerson
STERN GAS RESOURCES CALIFORNIA
200 N. PECOS ST.
NVER CO 80234
03) 252-6224
ickers@westerngas.com
estern Gas Resources California

David Bergquist
KEVIN BOUDREAUX; TOM DILL
WESTERN HUB PROPERTIES, LLC
14811 ST. MARYS LANE, SUITE 150
HOUSTON TX 77079
(281) 679-3597
djbergguist@westernhub.com
For: Lodi Gas Storage, LLC

********** STATE SERVICE **********

Donald L. Jackson
Valuation Division
BOARD OF EQUALIZATION
450 N STREET, MIC: 61
SACRAMENTO CA 94279-0061
(916) 322-2323

John Palmer
Department Of General Services
COUNTY OF SACRAMENTO
3284 RAMOS CIRCLE
SACRAMENTO CA 95827

John G. Larrea
Energy Consultant
CPUC - OGA
770 L STREET SUITE 1050
SACRAMENTO CA 95814
(916) 327-1418
jgl@cpuc.ca.gov

Larry Eng
Assistant Regional Manager
DEPARTMENT OF FISH AND GAME
1701 NIMBUS ROAD
RANCHO CORDOVA CA 95670
For: DEPARTMENT OF FISH & GAME

Janet A. Econome
Administrative Law Judge Division
RM. 5113
505 VAN NESS AVE
SAN FRANCISCO CA 94102
(415) 703-1494
jjj@cpuc.ca.gov

Judith Ikle
Energy Division
AREA 4-A
505 VAN NESS AVE
SAN FRANCISCO CA 94102
(415) 703-1486
jci@cpuc.ca.gov

Barbara Ortega
Executive Division
RM. 500
320 WEST 4TH STREET SUITE 500
LOS ANGELES CA 90013
(213) 576-7070
bho@cpuc.ca.gov

Robert M. Pocta
Office of Ratepayer Advocates
RM. 4101
505 VAN NESS AVE
SAN FRANCISCO CA 94102
(415) 703-2871
rmp@cpuc.ca.gov
For: Office of Ratepayer Advocates

********** SERVICE LIST **********

Rosalina White
Public Advisor Office
[illegible]. 5303
VAN NESS AVE
[illegible] FRANCISCO CA 94102
(415) 703-2074
raw@cpuc.ca.gov

********** INFORMATION ONLY **********

Peter Moritzburke
CAMBRIDGE ENERGY RESEARCH ASSOCIATES
1999 HARRISON STREET, STE 950
OAKLAND CA 94612
(510) 874-4383
pmoritzburke@cera.com

Joe A. Cotta
COTTA PROPERTIES, INC.
9414 KOST ROAD
GALT CA 95632
(209) 745-4538
winevinz@aol.com

Robert J. [illegible]ral
Chairman, Board Of Supervisors
COUNTY OF SAN JOAQUIN
[illegible]22 EAST WEBER AVENUE, ROOM 711
[illegible]TOCKTON CA 95202-2777

[illegible]runo Gaillard
[illegible]NRON CORP.
[illegible] [illegible]ALIFORNIA STREET, SUITE 1950
[illegible]RANCISCO CA 94111
[illegible] 782-7810
gaillar@enron.com
[illegible]or: Enron Corp.

[illegible]arlan Glines
[illegible]roject Manager
[illegible]NES & STOKES
[illegible]00 V STREET
[illegible]CRAMENTO CA 95818-1914
[illegible]vidB@jsanet.com

[illegible]omas R. Dill
[illegible]DI GAS STORAGE, LLC
[illegible]O WESTERN HUB PROPERTIES
[illegible]811 ST. MARYS LANE, SUITE 150
[illegible]USTON TX 77079
[illegible]81) 679-1221

[illegible]hony Pescetti
[illegible]ATE CAPITOL, ROOM 2130
[illegible]RAMENTO CA 95814

[illegible]rles Gardiner
[illegible]ncipal
[illegible]LIC AFFAIRS MANAGEMENT
[illegible] THE EMBARCADERO, SUITE 210
[illegible] FRANCISCO CA 94105
[illegible]ardiner@pamsf.com

[illegible]. Robertson
[illegible] ROBERTSON
[illegible] UNIVERSITY AVENUE, STE 200
[illegible]RAMENTO CA 95825
[illegible]5) 929-7000

(END OF ATTACHMENT A)

ATTACHMENT B

(12 pages)

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
LAND USE, PLANNING, AND AGRICULTURAL RESOURCES		
Proposed Project		
3.1-1: Temporary Disruption of Agricultural Production during Construction (Significant)	Mitigation Measure 3.1-1: Avoid pipeline construction in and near vineyards during harvesting season	Less than significant
3.1-2: Permanent Loss of Agricultural Production Capability (Significant)	Mitigation Measure 3.1-2: Bury pipelines at a depth of 8 feet in lands suitable for grape production but that have not already been deep-ripped, and at least 2 feet below the bottom of existing irrigation and drainage ditches, or obtain landowner agreement to bury the pipeline at a shallower depth	Less than significant
3.1-3: Loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (Less than significant)	None required	Less than significant
3.1-4: Compatibility with Surrounding Land Uses (Less than significant)	None required	Less than significant
3.1-5: Potential Inconsistency with Plans and Policies		
Proposed pipeline alignment (Significant and unavoidable):	No mitigation is available to reduce the inconsistency of the proposed pipeline alignment with local and Delta Protection Commission policies to a less-than-significant level	Significant and unavoidable
Airport land use plan (Significant):	Mitigation Measure 3.1-3: Obtain determination that the project is consistent with or amend the airport land use plan	Less than significant
3.1-6: Potential Conflicts with Lands under Williamson Act Contracts (Less than significant)	None required	Less than significant

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Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.1-7: Consistency with Proposed Land Uses (Less than significant)	None required	Less than significant
Public Right-of-Way Route Alternative		
3.1-8: Temporary Disruption of Agricultural Production during Construction (Significant)	Mitigation Measure 3.1-1: Avoid construction in vineyards during harvesting season	Less than significant
3.1-9: Permanent Loss of Agricultural Production Capability (Less than significant)	Mitigation Measure 3.1-2: Bury pipelines at a depth of 8 feet in lands suitable for grape production but that have not already been deep-ripped, and at least 2 feet below the bottom of existing irrigation and drainage ditches, or obtain landowner agreement to bury the pipeline at a shallower depth	Less than significant
3.1-10: Loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (Less than significant)	None required	Less than significant
3.1-11: Compatibility with Surrounding Land Uses (Significant)	Mitigation Measure 3.1-4: Minimize effects to the community of Terminous Mitigation Measure 3.1-5: Minimize effects on Brannan Island State Recreation Area facilities	Less than significant
3.1-12: Potential Inconsistency with Plans and Policies (Significant)	Mitigation Measure 3.1-3: Obtain determination that the project is consistent with or amend the airport land use plan	Less than significant
3.1-13: Potential Conflicts with Lands under Williamson Act Contracts (Less than significant)	None required	Less than significant
3.1-14: Consistency with Proposed Land Uses (Less than significant)	None required	Less than significant
Existing Pipeline Corridor Alternative		
3.1-15: Temporary Disruption of Agricultural Production during Construction (Significant)	Mitigation Measure 3.1-1: Avoid construction in and near vineyards during harvesting season	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.1-16: Permanent Loss of Agricultural Production Capability (Less than significant)	Mitigation Measure 3.1-2: Bury pipelines at a depth of 8 feet in lands suitable for grape production but that have not already been deep-ripped, and at least 2 feet below the bottom of existing irrigation and drainage ditches, or obtain landowner agreement to bury the pipeline at a shallower depth	Less than significant
3.1-17: Loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (Less than significant)	None required	Less than significant
3.1-18: Compatibility with Surrounding Land Uses (Significant)	Mitigation Measure 3.1-6: Minimize effects to residential property in the city of Isleton Mitigation Measure 3.1-5: Minimize effects on Brannan Island State Recreation Area facilities	Less than significant
3.1-19: Potential Inconsistency with Plans and Policies (Significant)	Mitigation Measure 3.1-3: Obtain determination that the project is consistent with or amend the airport land use plan	Less than significant
3.1-20: Potential Conflicts with Lands under Williamson Act Contracts (Less than significant)	None required	Less than significant
3.1-21: Consistency with Proposed Land Uses (Less than significant)	None required	Less than significant
Composite Route Alternative (Preferred Alternative)		
3.1-22: Temporary Disruption of Agricultural Production during Construction (Significant)	Mitigation Measure 3.1-1: Avoid construction in and near vineyards during harvesting season	Less than significant
3.1-23: Permanent Loss of Agricultural Production Capability (Significant)	Mitigation Measure 3.1-2: Bury pipelines at a depth of 8 feet in lands suitable for grape production but that have not already been deep-ripped, and at least 2 feet below the bottom of existing irrigation and drainage ditches, or obtain landowner agreement to bury the pipeline at a shallower depth	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.1-24: Loss of Farmland, Farmland of Statewide Importance, and Unique Farmland (Less than significant)	None required	Less than significant
3.1-25: Compatibility with Surrounding Land Uses (Significant)	Mitigation Measure 3.1-5: Minimize effects on Brannan Island State Recreation Area facilities Mitigation Measure 3.1-6: Minimize effects to residential property in the City of Isleton	Less than significant
3.1-26: Potential Inconsistency with Plans and Policies (Significant)	Mitigation Measure 3.1-3: Obtain determination that the project is consistent with or amend the airport land use plan	Less than significant
3.1-27: Potential Conflicts with Lands under Williamson Act Contracts (Less than significant)	None required	Less than significant
3.1-28: Consistency with Proposed Land Uses (Less than significant)	None required	Less than significant
POPULATION AND HOUSING		
Proposed Project and Project Alternatives		
3.2-1: Temporary Increase in Local Population, Resulting in Minimal Growth in Regional Population (Less than significant)	None required	Less than significant
3.2-2: Temporary Increase in Local Population and Temporary Need for Housing for up to 60 People (Less than significant)	None required	Less than significant
3.2-3: No Displacement of Existing Housing Units or Displacement of a Substantial Number of People That Would Necessitate the Construction of Replacement Housing Elsewhere (Less than significant)	None required	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
GEOLOGY, SOIL, AND PALEONTOLOGY		
Proposed Project and Project Alternatives		
3.3-1: Potential to Cause Substantial Wind and Water Erosion (Less than significant)	None required	Less than significant
3.3-2: Location of Project Facilities on a Geological Unit or Soil that is Unstable, Potentially Resulting in Exposure of the Pipeline to Loss of Support and Damage (Less than significant)	Mitigation Measure 3.3-1: Identify potential areas of concern regarding potential future interference of the pipeline with agricultural practices and undertake remedial actions as necessary	Less than significant
3.3-3: Potential to Expose People or Structures to Substantial Adverse Geologic Hazards (Less than significant)	None required	Less than significant
HYDROLOGY		
Proposed Project and Project Alternatives		
3.4-1: Potential Degradation of Surface Water Quality during Construction (Less than significant)	None required	Less than significant
3.4-2: Potential Degradation of Surface Water Quality during Hydrostatic Testing of the Pipeline (Less than significant)	None required	Less than significant
3.4-3: Potential Degradation of Groundwater Quality During Well Drilling (Less than significant)	None required	Less than significant
3.4-4: Potential Degradation of Water Quality during Operation of the Project (Less than significant)	None required	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.4-5: Potential to Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding Caused by the Project (Less than significant)	None required	Less than significant
3.4-6: Potential to Expose Structures to a Significant Risk of Loss Involving Flooding Related to Delta Island Flooding (Significant)	Mitigation Measure 3.4-1: Use concrete coating, concrete collars, or other suitable methods to weight the pipeline in all areas subject to the 100-year flood, where saturated soils would not prevent the pipeline from floating	Less than significant
AIR QUALITY		
Proposed Project and Project Alternatives		
3.5-1: Construction-Related PM10 Emissions in San Joaquin County (Significant)	Mitigation Measure 3.5-1a: Comply with the San Joaquin Air District's Regulation VIII (Fugitive Dust Prohibitions)	Less than significant
	Comply with the San Joaquin Air District's recommendation for construction equipment mitigation measures	
3.5-2: Construction-Related PM10 Emissions in Sacramento County (Significant)	Mitigation Measure 3.5-2: Water the construction site with adequate frequency to keep soil moist at all times	Less than significant
3.5-3: Construction-Related ROG and NOx Emissions in Sacramento County (Significant and unavoidable)	No mitigation is available to reduce this impact to a less-than-significant level. However, as a best management practice, CPUC will require implementation of Mitigation Measure 3.5-1b for construction activities within Sacramento County	Significant and unavoidable
3.5-4: Controlled Emissions of NOx and ROG during Project Operation Exceed Emissions Offset Trigger Thresholds (Significant)	Mitigation Measure 3.5-3: Obtain emission offsets for NO_x and ROG emission increases or install electric compressor facilities	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.5-5: Emission of Toxic Air Pollutants from Natural Gas-Fired Equipment (Less than significant)	None required	Less than significant
3.5-6: Potential for Objectionable Odors (Significant)	Mitigation Measure 3.5-4: Properly construct, inspect, and maintain facilities	Less than significant
TRANSPORTATION AND CIRCULATION		
Proposed Project and Project Alternatives		
3.6-1: Temporary Increase in Traffic in the Project Area during Construction (Less than significant)	None required	Less than significant
3.6-2: Temporary Disruption of Circulation from Project Construction (Significant)	Mitigation Measure 3.6-1: Develop and implement a traffic control plan	Less than significant
3.6-3: Minimal Increase in Traffic during Project Operation (Less than significant)	None required	Less than significant
3.6-4: Potential for Interference with Emergency Response Routes (Significant)	Mitigation Measure 3.6-1: Develop and implement a traffic control plan	Less than significant
BIOLOGICAL RESOURCES		
Proposed Project and Project Alternatives		
3.7-1: Potential Disturbance to Special-Status Plant Species in Unsurveyed or Modified Portions of the Alignment (Significant)	Mitigation Measure 3.7-1a: Conduct floristic surveys to identify the location and extent, if any, of threatened, endangered, proposed, and special-status plants Mitigation Measure 3.7-1b: Avoid and protect known federal and state listed plants	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
	Mitigation Measure 3.7-1c: Minimize long-term impacts on special-status plant populations	
3.7-2: Potential Introduction or Spread of Noxious and Invasive Weeds and Pests During Construction Activities (Significant)	Mitigation Measure 3.7-2: Control dispersal of noxious and invasive weeds and pests during construction activities	Less than significant
3.7-3: Potential Removal or Disturbance of Marsh or Riparian Scrub/Woodland Habitat (Less than significant)	None required	Less than significant
3.7-4: Potential Disturbance of Sensitive Habitats (Significant)	Mitigation Measure 3.7-3a: Confine construction activities and equipment to the designated construction work area	Less than significant
	Mitigation Measure 3.7-3b. Avoid and protect sensitive vegetation and wetland resources near designated construction work area	
	Mitigation Measure 3.7-3c. Reestablish preconstruction site conditions to allow natural colonization of plant species and, if necessary, reseed	
3.7-5: Potential Disturbance of Agricultural, Pasture, and Ruderal and Developed Lands (Less than significant)	None required	Less than significant
3.7-7: Potential Impacts on Aquatic Invertebrates, California Tiger Salamander, and Western Spadefoot Toad and Their Habitat (Significant)	Mitigation Measure 3.7-3a: Confine construction activities and equipment to the designated construction work area	Less than significant
	Mitigation Measure 3.7-3b. Avoid and protect sensitive vegetation and wetland resources near designated construction work area	
	Mitigation Measure 3.7-3c. Reestablish preconstruction site conditions to allow natural colonization of plant species and, if necessary, reseed	

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.7-8: Potential Impact on the Valley Elderberry Longhorn Beetle (Significant)	Mitigation Measure 3.7-5. Conduct preconstruction valley elderberry longhorn beetle surveys and avoid or compensate for loss of habitat	Less than significant
3.7-9: Potential Disturbance and Direct Mortality of Giant Garter Snakes (Less than significant)	None required. See Section 2.4.13, "Mitigation Measures Proposed by the Applicant"	Less than significant
3.7-10: Potential Impact on Western Pond Turtles (Less than significant)	None required	Less than significant
3.7-11: Potential Disturbance to the Greater Sandhill Crane (Significant)	Mitigation Measure 3.7-6: Restrict the timing of construction activities on Staten Island, Brack Tract, and Canal Ranch	Less than significant
3.7-12: Potential Disturbance of Active Raptor and Owl Nests and Tricolored Blackbird Nests (Significant)	Mitigation Measure 3.7-7. Conduct preconstruction surveys for nesting raptors, owls, and tricolored blackbirds and establish an appropriate buffer distance around nest sites	Less than significant
3.7-13: Loss of or Disturbance to Nesting Western Burrowing Owls (Significant)	Mitigation Measure 3.7-8: Consult with CDFG and follow CDFG's burrowing owl mitigation guidelines	Less than significant
3.7-14: Project Construction Activities May Cause the Reproductive Failure of Nesting Swainson's Hawks (Significant)	Mitigation Measure 3.7-9. Conduct preconstruction surveys for nesting Swainson's hawks and follow CDFG's mitigation guidelines for Swainson's hawks	Less than significant
3.7-15: Disturbance of Wintering Waterfowl and Shorebirds (Less than significant)	None required	Less than significant
ENERGY AND MINERAL RESOURCES		
Proposed Project and Project Alternatives		
3.8-1: Potential to Overcover or Preclude Extraction of Mineral Resources (Less than significant)	None required	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
PUBLIC HEALTH AND PUBLIC SAFETY		
Proposed Project and Project Alternatives		
3.9-1: Potential for Public Health Hazard Involving the Use, Production, or Disposal of Hazardous Materials (Less than significant)	None required	Less than significant
3.9-2: Potential Risk to Public Safety and the Environment through Release of Emissions or Risk of Upset (Less than significant)	None required	Less than significant
3.9-3: Potential Public Health Hazard Associated with Pipeline Rupture That Could Lead to an Explosion Resulting in Property Damage or Fatalities (Less than significant)	None required	Less than significant
3.9-4: Potential Peat Fire Hazard During Pipeline Construction (Significant)	Mitigation Measure 3.9-1: Develop and implement a peat fire prevention plan	Less than significant
NOISE		
Proposed Project and Project Alternatives		
3.10-1: Exposure of Noise-Sensitive Land Uses to Noise from Construction Activities Other Than Well Drilling (Significant)	Mitigation Measure 3.10-1: Employ noise-reducing construction practices to reduce construction noise to acceptable levels	Less than significant
3.10-2: Exposure of Noise-Sensitive Land Uses to Noise from Drilling Activities (Significant)	Mitigation Measure 3.10-2: Restrict the hours of noisiest activities, install noise-reducing barriers around drilling sites, and employ other noise-reducing "best management practices" to reduce drilling noise	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.10-3: Exposure of Noise-Sensitive Land Uses to Noise from Operation of the Separator Facility (Less than significant)	None required	Less than significant
3.10-4: Exposure of Noise-Sensitive Land Uses to Noise from Operation of the Compressor Facility (Less than significant)	Mitigation Measure 3.10-3: Minimize the occurrence of emergency depressurization events	Less than significant
PUBLIC SERVICES AND SOCIOECONOMICS		
Proposed Project and Project Alternatives		
3.11-1: Temporary Increase in Demand for Emergency Response in the Project Area (Less than significant)	Mitigation Measure 3.11-1: Provide appropriate equipment and training to local fire agencies	Less than significant
3.11-2: Minimal Increase in Demand for Landfill Space Associated with Generation of Waste during Project Construction (Less than significant)	None required	Less than significant
3.11-3: Potential Interference with Existing Utility Infrastructure (Less than significant)	None required	Less than significant
VISUAL RESOURCES		
Proposed Project and Project Alternatives		
3.12-1: Potential to Degrade the Existing Visual Character of the Site (Significant)	Mitigation Measure 3.12-1: Develop and implement landscaping and site design plan	Less than significant
3.12-2: Potential to Create New Sources of Substantial Light and Glare That Would Adversely Affect Nighttime Views in the Project Area (Less than significant)	None required	Less than significant

Environmental Impact (Significance before Mitigation)	Mitigation Measures	Significance after Mitigation
3.12-3: Potential to Affect Scenic Vistas and Damage Scenic Resources along a Scenic Highway (Less than significant)	None required	Less than significant
CULTURAL RESOURCES		
Proposed Project and Project Alternatives		
3.13-1: Potential Disturbance to Previously Unidentified Cultural Resources during Project Construction (Less than significant)	None required	Less than significant

(END OF ATTACHMENT B)

ATTACHMENT C

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TABLE 2

LODI GAS STORAGE PROJECT
DRAFT MITIGATION MONITORING PLAN—COMPOSITE ROUTE ALTERNATIVE
(PREFERRED ALTERNATIVE)

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
LAND USE, PLANNING, AND AGRICULTURAL RESOURCES				
Temporary disruption of agricultural production during construction *Potential temporary disruption of agricultural production during pipeline construction could have a significant impact on vineyard operations because of the short time frame available to successfully harvest grapes and the intensity of the harvesting effort.*	**Mitigation Measure 3.1-1: Avoid pipeline construction in and near vineyards during harvest season** *Avoidance of all construction activities during and immediately before (within 4 weeks of) the harvest season in and within 2,000 feet of vineyards whose owners have not reached an agreement with the project Applicant. The precise period of prohibition of construction activities will be determined by CPUC and will take into account the type of grape and seasonal weather conditions.*	LGS will provide CPUC with copies of all agreements with landowners that permit construction in and within 2,000 feet of vineyards during the harvest season. CPUC will map such lands, along with lands for which no agreement exists, and monitor construction activities to ensure compliance with this measure.	CPUC	The agreements shall be provided to CPUC by LGS no later than July 31 of any year in which construction is scheduled to occur during harvest season.
Permanent loss of agricultural production capability *Potential interference of pipeline with future grape production on lands that have not previously been deep ripped.*	**Mitigation Measure 3.1-2: Bury pipelines at a depth of 8 feet in lands that are suitable for grape production but that have not already been deep ripped, and at least 2 feet below the bottom of existing irrigation and drainage ditches, or obtain landowner agreement to bury pipeline at a shallower depth** *The Applicant shall bury project-related pipelines at a depth of 8 feet in lands that are considered suitable for grape production but that have not previously been deep ripped unless other agreements are reached with individual landowners that allow for installation of the pipeline at a shallower depth (the pipeline will be buries at least 4 feet). Suitability of lands for grape*	LGS will provide CPUC with documentation showing that lands have been identified and that pipeline depths are appropriate. LGS will also provide CPUC with copies of all agreements with landowners that permit shallower installation of the pipeline in such lands.	LGS and CPUC	Agreements will be provided to CPUC before completion of project design and engineering. Project plans and designs will be submitted to CPUC clearly showing burial depths on individual parcels before release of bid specifications.

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Impact	Mitigation Monitoring Procedure	Monitoring / ction	Responsibility	Timing
	production will be determined in consultation with a University of California Cooperative Extension farm advisor with expertise in grape production. Such consultation will be completed as soon as practicable after issuance of a certificate of public convenience and necessity. *The Applicant shall also bury project-related pipelines at least 2 feet below the bottom of existing irrigation and drainage ditches along the pipeline route to minimize disruptions to existing farming practices.*			
Potential inconsistency with plans and policies *The compressor location at the airport site is potentially inconsistent with the locally adopted Airport Land Use Plan.*	**Mitigation Measure 3.1-3: Obtain determination that the project is consistent with or amend the airport land use plan** *Obtain determination from Airport Land Use Commission that project is consistent with plan or amend the plan.*	CPUC will monitor the Applicant's application to the Airport Land Use Commission	CPUC and Airport Land Use Commission	Proposed use must be approved by the Airport Land Use Commission before project construction begins.
Compatibility with surrounding land uses *Pipeline construction could conflict with surrounding land uses at Brannan Island State Recreation Area and in the City of Isleton.*	**Mitigation Measure 3.1-5: Minimize effects on Brannan Island State Recreation Area facilities** *At Brannan Island State Recreation Area, directional drilling equipment shall be located at the south end of the drilling site on Sherman Island. If construction occurs during May 1 through September 30, construction activities within the park shall be limited to the hours of 8:00 a.m. to 5:00 p.m. Monday through Friday unless permission is granted by the Park Superintendent. All park facilities shall be avoided and construction sites shall be fenced.*	Construction activities will be monitored to ensure that this measure is implemented.	CPUC	During construction at Brannan Island State Recreation Area.

Impact	Mitigation Monitoring Procedure	Monitoring / ction	Responsibility	Timing
	Mitigation Measure 3.1-6: Minimize effects to residential property in the City of Isleton *Within the City of Isleton, the pipeline should be directionally drilled or bored underneath trees and property located at the southern end of Sixth Street.*	Construction activities will be monitored to ensure that this measure is implemented.	CPUC	During construction at the subject location.
	GEOLOGY, SOIL, AND PALEONTOLOGY			
Location of project facilities on a geological unit or soil that is unstable, potentially resulting in exposure of the pipeline to loss of support and damage *The transmission pipeline alignment would cross soils that are subsiding due to oxidation of organic materials and erosion. It is unlikely that in areas with high subsidence rates that the pipeline can be buried at a depth that would preclude potential interference with agricultural practices. Because of the shallow depth to groundwater and the low strength of the soil materials in these areas it may not be possible to excavate a trench deep enough to keep the pipeline at a minimum of 4 feet below ground surface during the useful life of the project.*	**Mitigation Measure 3.3-1: Identify potential areas of concern regarding potential future interference of the pipeline with agricultural practices and undertake remedial actions as necessary** *Prior to project construction, LGS will be required to prepare a report identifying specific areas where soil conditions are such that placement of the pipeline could lead to potential future interference with agricultural practices because of unstable soils. LGS will submit this report to CPUC for review and approval. LGS will be required to monitor the depth of the pipeline in these areas annually during the life of the project and submit annual reports to CPUC each January 31. The intent of this mitigation measure is to ensure that the pipeline remains a minimum of 4 feet below the ground surface. In areas where monitoring during the life of the project shows that the pipeline has become shallower than 3.5 feet below the ground surface, LGS will be required by CPUC to implement remediation measures that may include: 1) reburying the pipeline to an appropriate depth; 2) looping the pipeline segment by placing a replacement pipeline segment at a greater depth and removing the shallow segment; 3) importing additional soil cover to maintain the depth of pipeline at least 4 feet below the ground surface. However, importation of additional soil cover will not be permitted if it would have interfered with then-existing agricultural practices, such as furrow irrigation; or 4) other measures proposed by LGS*	CPUC will review the submittals from LGS to ensure compliance with the measures outlined above.	CPUC	The report identifying potential areas of concern shall be submitted to CPUC prior to the start of construction. Annual reports will be submitted by LGS and promptly reviewed by CPUC. Remedial actions needed will be completed within 1 year of identification of specific problem areas.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
	and approved by CPUC. Additionally, when the project is abandoned, pipeline segments in subsiding lands will be removed to prevent future interference with agricultural operations. *Alternatively, at any time during the life of the project, LGS may provide the CPUC with proof of mutually acceptable agreements with individual landowners that indicate that the measures described above are not necessary and that any such potential interference with agricultural operations are acceptable to the landowners.*			
	HYDROLOGY			
Potential to expose structures to a significant risk of loss involving flooding related to Delta island flooding *The Composite Route Alternative pipeline alignment would cross numerous Delta islands that are protected by levee systems. The Delta region has a long history of levee failures, and it is likely that during the useful life of the project one or more Delta islands could be flooded. Additionally, habitat restoration plans proposed for Delta islands include intentional flooding. Potential damage could occur to the pipeline if the soil cover is eroded, or if it is saturated, in which case the pipeline may float out of the trench and become exposed to shear and bending loads that exceed its design capacity.*	**Mitigation Measure 3.4-1: Use concrete coating, concrete collars, or other suitable methods to weight the pipeline in all areas subject to the 100-year flood, where saturated soils would not prevent the pipeline from floating** *The project proponent shall use weighted pipe (concrete coated pipe or concrete pipe collars) in all areas that are subject to inundation during the 100-year flood event where saturated soils would not prevent the pipeline from floating. These areas include Delta islands that may be flooded intentionally in the future.*	LGS will provide CPUC with copies of the pipeline engineering design and supporting soil engineering studies at least 30 days before construction is scheduled to begin in areas west of Interstate 5.	CPUC	CPUC will monitor the construction of the pipeline to ensure that the mitigation measure is implemented.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
		AIR QUALITY		
Construction-Related PM10 Emissions in San Joaquin County *Estimated construction-related emissions in San Joaquin County are shown in Table 3.5-3. There are no construction-related emissions significance thresholds for the San Joaquin Valley; all emissions are considered significant. However, the San Joaquin Air District requires contractors to implement effective and comprehensive control measures for their projects.*	**Mitigation Measure 3.5-1a: Comply with the San Joaquin Air District's Regulation VIII (Fugitive Dust Prohibitions)** *The project Applicant shall comply with the San Joaquin Air District=s Regulation VIII (fugitive dust prohibitions) to minimize the generation of fugitive dust In addition, traffic speeds on unpaved roads shall be limited to 5 miles per hour, and more stringent dust controls will be used within 2,000 feet of vineyards during the growing season (anytime between bud break and the conclusion of harvesting) to minimize effects of dust on grape production. The CPUC monitor will have the authority to require additional watering or other treatments as needed to reduce fugitive dust to acceptable levels.*	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications. LGS shall also provide to CPUC a copy of Regulation VIII (Fugitive Dust Prohibitions).	CPUC	Bid specifications will be provided to CPUC prior to release for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
	Mitigation Measure 3.5-1b: Comply with the San Joaquin Air District's recommendation for construction equipment mitigation measures *The project Applicant shall comply with the San Joaquin Air District=s recommendation for construction equipment mitigation measures to reduce exhaust emissions from construction equipment.*	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications. LGS shall also provide CPUC with a copy of San Joaquin Air District's recommendations for construction equipment.	CPUC	Bid specifications will be provided to CPUC prior to release for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Construction-Related PM10 Emissions in Sacramento County *Estimated construction-related emissions of PM10 would be significant because they exceed the Sacramento Air District=s significance threshold for*	**Mitigation Measure 3.5-2: Water the construction site with adequate frequency to keep soil moist at all times** *The project Applicant shall water the construction site with adequate frequency to keep the soil moist at all times. This mitigation measure will control 75 percent of fugitive dust-related PM10 emissions.*	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC prior to release for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
construction emissions. The dust generated during construction of the pipeline is the main source of PM10 emissions from the Composite Route Alternative.				
Construction-Related ROG and NO_x Emissions in Sacramento County *Construction-related ROG and NOx emissions in Sacramento County would be significant because they exceed the Sacramento Air District=s significance threshold. Equipment exhaust emissions contribute to the ROG and NOx emissions. Although short term, based on Sacramento Air District=s significance threshold, this impact is significant and unavoidable.*	**Mitigation Measure 3.5-1b: Comply with the San Joaquin Air District's recommendation for construction equipment mitigation measures** *The project Applicant shall comply with the San Joaquin Air District=s recommendation for construction equipment mitigation measures to reduce exhaust emissions from construction equipment.*	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications. LGS shall also provide CPUC with a copy of San Joaquin Air District's recommendations for construction equipment.	CPUC	Bid specifications will be provided to CPUC prior to release for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Controlled Emissions of NOx and ROG during Project Operation that Exceed Emission Offset Trigger Thresholds *The emission of ozone precursors (NOx and ROG) during operation of the Composite Route Alternative, has the potential to further exacerbate high ozone concentrations in the San Joaquin Valley. Also, high ozone levels can severely reduce grape yields. Grapes*	**Mitigation Measure 3.5-3: Obtain emission offsets for NO_x and ROG emission increases or install electric compressor facilities** *The Applicant must obtain emission offsets in amounts equal to the net increase in NOx and ROG. The actual amount of emission offsets will be based on the final agreement between the Applicant and the San Joaquin Air District as to what constitutes BACT. Alternatively, the San Joaquin Air District and/or the Applicant may elect to install electric compressor facilities.*	LGS will provide CPUC with evidence that it has complied with the requirements of the San Joaquin Air District. This evidence shall be in the form of a final permit from the air district.	CPUC	The final permit will be provided to CPUC prior to the beginning of construction of the compression facility.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
are one of the most important crops in the region.				
Potential for Objectionable Odors *The collection and processing of natural gas at the separation facility, compressor facility, and injection/withdrawal wells have the potential to result in the release of small quantities of odorized natural gas (objectionable odors). Odorized gas could be emitted from piping components such as valves and flanges (fugitive emissions).*	**Mitigation Measure 3.5-4: Properly construct, inspect, and maintain facilities** *Aboveground piping components will be properly maintained to minimize leakage of odorized gas. Piping connections will be welded to the extent practicable given design considerations. Valves, flanges, and other piping components will be subject to a quarterly inspection and a maintenance program to identify and repair leaking components. An inspection and maintenance report will be submitted to CPUC identifying all detected leaks and repair actions taken no more than 1 month following each quarterly inspection. LGS will be required to* maintain a hot line to handle odor complaints. This hot line information shall be provided to all property owners and residents within 3,000 feet of the facility. If complaints are received, LGS will conduct an inspection within 48 hours and fix any leaks detected within 72 hours. LGS will provide the CPUC with reports of complaints and subsequent maintenance and repair actions within 2 weeks of the complaint.	LGS will promptly submit reports to CPUC for review.	LGS and CPUC	Reports will be submitted as described under the mitigation monitoring procedure. CPUC will promptly review the reports and identify any remedial actions necessary.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
TRANSPORTATION AND CIRCULATION				
Temporary disruption of circulation from project construction *Construction traffic on local roadways during construction of facilities would inconvenience residences, businesses, and adjacent agricultural operations. Although the extent of public roads affected by construction of the Composite Route Alternative is limited, the potential remains for construction traffic and construction activities within and adjacent to road rights-of-way to disrupt routine agricultural operations.*	**Mitigation Measure 3.6-1: Develop and implement a traffic control plan** *In coordination with the Sacramento County and San Joaquin County Departments of Public Works, the Applicant will develop and implement a traffic control plan for all construction activities proposed within and adjacent to public road rights-of-way that would delay or disrupt local roadway traffic. Factors taken into account by the plan will include (but are not limited to) lane closures, road closures, traffic flow during peak hours, traffic control devices, detours, access to driveways, private roads, and farm roads, and development of an emergency access plan.*	LGS will provide CPUC with a copy of the traffic management plan. CPUC will monitor construction activities within and adjacent to public road rights-of-way to ensure compliance with the plan.	CPUC	Monitoring should occur at least weekly during construction within and adjacent to public road rights-of-way.
Potential for interference with emergency response routes *Construction-related activities within and adjacent to public road rights-of-way and increased truck and vehicle traffic along project access routes could temporarily increase response times for emergency response providers along affected roadways.*	**Mitigation Measure 3.6-1: Develop and implement a traffic control plan** *In coordination with the Sacramento County and San Joaquin County Departments of Public Works, the Applicant will develop and implement a traffic control plan for all construction activities proposed within and adjacent to public road rights-of-way that would delay or disrupt local roadway traffic. Factors taken into account by the plan will include (but are not limited to) lane closures, road closures, traffic flow during peak hours, traffic control devices, detours, access to driveways, private roads, and farm roads, and development of an emergency access plan.*	LGS will provide CPUC with a copy of the traffic management plan. CPUC will monitor construction activities within and adjacent to public road rights-of-way to ensure compliance with the plan.	CPUC	Monitoring should occur at least weekly during construction within and adjacent to public road rights-of-way.

Impact	Mitigation Monitoring Procedure	Monitoring / ction	Responsibility	Timing
	BIOLOGICAL RESOURCES			
Potential disturbance to special-status plant species in unsurveyed portions of the alignment *The Composite Route Alternative could potentially result in effects on threatened, endangered, rare, and other special-status plants if they occur within areas directly affected by the project.*	**Mitigation Measure 3.7-1a: Conduct floristic surveys to identify the location and extent, if any, of threatened, endangered, proposed, and special status plants** *Prior to construction activities in any area, a qualified biologist will be retained by CPUC to determine the need to conduct detailed floristic surveys and to conduct appropriate surveys according to CDFG Guidelines to identify the locations of threatened, endangered, proposed, and other special-status plants. Areas that have a high likelihood to support special-status species will either be avoided by changes in construction techniques or alignment, or the area will be avoided until floristic surveys can be conducted and the site can be cleared for construction by the botanist. Active agricultural fields, excluding ruderal edge habitat that could contain habitat for special-status species, slough and river channels, and other sensitive habitat locations already designated for surface avoidance do not require surveys because they do not support special-status plant species or have already been identified as locations or community types to be avoided by project activities according to the project design.*	Construction sites will be surveyed by CPUC to determine the presence or potential presence of special-status plant species.	CPUC	Construction sites will be surveyed prior to construction activities in each area during the entire project construction phase.
	Mitigation Measure 3.7-1b: Avoid and protect known federal and state listed plants *Before construction activities are initiated near federal or state listed plant populations, the CPUC biological monitor will identify the location for a protective barrier. Special-status plant populations with a high potential to be disturbed will be identified and protected by installing fencing (e.g., barrier fencing, sedimentation fencing, straw bales) and posting signs. These protective barriers will be in place before construction activities are initiated*	All identified state and federally listed plant species will be avoided during construction.	CPUC	Monitoring will occur during the entire construction phase of the project.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
	and will remain in place until all construction activities that could disturb the special-status plants are completed.			
	Mitigation Measure 3.7-1c: Minimize long-term impacts on special-status plant populations *To minimize long-term impacts on plant species that are considered special-status species but are not state or federally listed, the project proponent will attempt to avoid impacts to these populations by prohibiting all construction activities in these areas. If directional drilling or project realignment is not feasible, the project proponent will implement the following general measures: 1) Notify CDFG at least 10 days in advance of construction that avoidance measures are not feasible; 2) Depending on the species, seed, propagules, and/or viable plant material will be collected and stored or maintained at a location acceptable to CDFG; 3) The topsoil (6-12 inches) from the excavated site will be stockpiled with intact roots, rhizomes, and seed bank. The topsoil and collected plant material will be replaced during the appropriate season following completion of construction. This activity will be monitored by a botanist familiar with the local flora; (4) Contact CDFG to report findings after construction is complete; and 5) Monitor the success in reestablishing the special-status plant population through one growing season and report the results to CDFG.*	Ensure that each step of the mitigation measure described above is implemented.	CPUC and LGS	During the entire construction phase of the project as necessary.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Potential introduction or spread of noxious and invasive weeds and pests during construction *Construction activities could result in the introduction or spread of noxious weeds into currently uninfested areas, potentially resulting in the displacement of native plant species or commercially important agricultural crops.*	**Mitigation Measure 3.7-2: Control dispersal of noxious and invasive weeds and pests during construction activities** *To prevent the spread of noxious and invasive weeds into previously uninfected areas, the project proponent will implement the following measures: 1) Coordinate with the Sacramento and San Joaquin County Agricultural Commissioners= offices and CDFG to determine noxious and invasive weeds of concern in the proposed project area; 2) Stake noxious and invasive weed infestation areas prior to construction and clearly identify their locations on the construction drawings; 3) Control populations of existing, staked, noxious and invasive weeds of concern in the project area prior to initiation of construction activities by applying an acceptable herbicide or by employing acceptable mechanical methods of removal; 4) Wash all tools and equipment involved in the digging, handling, or moving of soils completely free of soil before moving from one vineyard to another vineyard; 5) Use certified weed-free imported materials; and 6) Conduct follow-up monitoring and treatment of noxious and invasive weeds introduced by project construction activities on lands and waterways in the project area that are not under active cultivation or vegetation management.*	Ensure that appropriate language is incorporated into bid specifications to require the measures to be implemented and monitor project construction activities to ensure compliance and appropriate action.	CPUC and LGS	During development of bid specifications and during project construction.
Potential disturbance of sensitive habitats *The Composite Route Alternative could result in the temporary disturbance of sensitive habitats that may occur in the project area, including vernal pools and swales, alkali grassland, native bunchgrass grassland, and*	**Mitigation Measure 3.7-3a: Confine construction activities and equipment to the designated construction work area** *To minimize potential impacts on sensitive vegetation and wetland resources, the contractor will be required to designate work areas outside the currently identified zone. These designated work areas may include staging areas and pipeline trench and construction access corridors. Before construction, additional work areas will be*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	CPUC and LGS	During development of bid specifications and during project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
seasonal wetlands. The effect on these areas would be minimal because the project includes provisions to avoid direct impacts to sensitive biological resources. However, some sensitive habitat areas may be indirectly affected by construction activities in adjacent areas or by modifications to the project alignment.	*surveyed by a qualified biologist, relocated as necessary to avoid effects on sensitive resources, approved by CPUC and demarcated before construction with lath and flagging, temporary orange construction fencing, or chain link fencing. Construction contractors will require that construction personnel stay within these designated work areas as a condition of employment. The project proponent will provide CPUC with draft bid specifications for review to ensure compliance with appropriate measures. Bid documents will not be released prior to CPUC approval.*			
	Mitigation Measure 3.7-3b: Avoid and protect sensitive vegetation and wetland resources near designated construction work area *To minimize impacts on sensitive vegetation and wetland resources immediately next to designated construction areas, construction contractors will post signs identifying areas containing sensitive vegetation and wetland resources as Restricted Areas@ and protect these areas with temporary barriers. The construction contractor will be required to keep construction equipment and personnel out of designated restricted areas.*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	CPUC and LGS	During development of bid specifications and during project construction.
	Mitigation Measure 3.7-3c: Reestablish preconstruction site conditions to allow natural colonization of plant species and, if necessary, reseed *In non-agricultural and developed areas, the construction contractor will be required to restore the construction zone to preconstruction site conditions. To ensure that impacts on native plant species and other natural communities are not long term, native topsoil will be immediately replaced and the natural site topography reestablished. Preconstruction conditions will be reestablished to allow natural colonization of plant species.*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	CPUC and LGS	During development of bid specifications and during project construction.
Potential disturbance to landmark trees or groves	**Mitigation Measure 3.7-4: Conduct preconstruction surveys and create buffer zones**	CPUC will ensure that appropriate surveys are conducted by a	CPUC and LGS	During development of project bid specifications

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
The Composite Route Alternative construction area may contain trees that would qualify for protection under tree ordinances in the Sacramento and San Joaquin county general plans. The Composite Route Alternative could potentially result in significant impacts to native trees, native oak trees, and landmark trees in the proposed project area in Sacramento County, and to native oak trees, heritage oak trees, or historical trees in the proposed project area in San Joaquin County. These impacts could result in the direct mortality or damage to trees that would qualify for protection under the ordinances.	**to minimize impacts to heritage and landmark trees** *Surveys will be conducted by a qualified botanist to identify the locations of native trees, native oak trees, and landmark trees in the project area in Sacramento County and of native oak trees, heritage oak trees, or historical trees in the project area in San Joaquin County. A plan shall be developed by the project proponent for treatment of all heritage and landmark trees. This plan shall be incorporated into bid specifications. The plan shall be provided by LGS to CPUC for approval prior to issuance of project bid specifications. All native trees, native oak trees, landmark trees, and groves to be avoided will be marked in the field and fenced, and all construction activities will be prohibited in these designated areas, following the guidelines in Mitigation Measures 3.7-3a and 3.7-3b. If trees cannot be avoided, compensatory actions will be determined in coordination with the Sacramento and San Joaquin County Planning Departments and the guidelines in the county tree ordinances.*	qualified botanist. CPUC will review the survey results and approve the proposed treatment prior to project construction.		and during project construction.
Potential impacts on aquatic invertebrates, California tiger salamander, and western spadefoot toad and their habitat *The Composite Route Alternative could potentially result in incidental impacts on aquatic invertebrates; California tiger salamander; and western spadefoot toad in and along the margins of vernal pools, freshwater marsh, and ponds. Impacts could result from construction activities associated with installation of pipelines and*	**Mitigation Measure 3.7-3a: Confine construction activities and equipment to the designated construction work area** *To minimize potential impacts on sensitive vegetation and wetland resources, the contractor will be required to designate work areas outside the currently identified zone. These designated work areas may include staging areas and pipeline trench and construction access corridors. Before construction, additional work areas will be surveyed by a qualified biologist, relocated as necessary to avoid effects on sensitive resources, approved by CPUC and demarcated before construction with lath and flagging, temporary orange construction fencing, or chain link fencing. Construction contractors will require that construction personnel stay within these designated*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	CPUC and LGS	During development of bid specifications and during project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
well pads. These impacts could result in the direct mortality of individuals and degradation of habitat by altering hydrological processes associated with their habitat.	*work areas as a condition of employment. The project proponent will provide CPUC with draft bid specifications for review to ensure compliance with appropriate measures. Bid documents will not be released prior to CPUC approval.*			
	Mitigation Measure 3.7-3b: Avoid and protect sensitive vegetation and wetland resources near designated construction work area *To minimize impacts on sensitive vegetation and wetland resources immediately next to designated construction areas, construction contractors will post signs identifying areas containing sensitive vegetation and wetland resources as Restricted Areas@ and protect these areas with temporary barriers. The construction contractor will be required to keep construction equipment and personnel out of designated restricted areas.*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	CPUC and LGS	During development of bid specifications and during project construction.
	Mitigation Measure 3.7-3c: Reestablish preconstruction site conditions to allow natural recolonization of plant species and, if necessary, reseed *In non-agricultural and developed areas, the construction contractor will be required to restore the construction zone to preconstruction site conditions. To ensure that impacts on native plant species and other natural communities are not long term, native topsoil will be immediately replaced and the natural site topography reestablished. Preconstruction conditions will be reestablished to allow natural colonization of plant species.*	Ensure that appropriate language is included in bid specifications and that the contractor(s) comply with these requirements.	LGS and CPUC	During development of bid specifications and during project construction.
Potential impact on the valley elderberry longhorn beetle *The Composite Route*	**Mitigation Measure 3.7-5: Conduct preconstruction valley elderberry longhorn beetle surveys and avoid or compensate for loss**	CPUC will review the information provided by the project proponent and require appropriate action	CPUC and LGS	Prior to and during project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Alternative may have significant impacts on the valley elderberry longhorn beetle if construction activities cause the mortality or lowered reproduction of elderberry shrubs. Although the project has been designed to avoid elderberry shrubs in the project area, minor changes in the final alignment may occur and the pipeline may affect shrubs in areas not yet surveyed.	**of habitat** *Before initiating construction, a qualified biologist will survey the final alignment corridor and document the extent of habitat, if any, for the valley elderberry longhorn beetle. If any habitat for the valley elderberry longhorn beetle is found, the project proponent will implement USFWS=s mitigation guidelines for the valley elderberry longhorn beetle by avoiding construction activities within 20 feet of any elderberry shrub. Where avoidance is not feasible, a compensation plan will be prepared and implemented to compensate for the loss of habitat.*	depending on its findings.		
Potential disturbance on the greater sandhill crane *The Composite Route Alternative could potentially affect the greater sandhill crane because construction activities could disturb sandhill cranes in essential wintering areas (Staten Island, Canal Ranch, and Brack Tract). Construction activities could cause the cranes to avoid or flush from important feeding areas for prolonged periods of time, resulting in disrupted feeding patterns and potentially affecting reproductive potential.*	**Mitigation Measure 3.7-6: Restrict the timing of construction activities on Staten Island, Brack Tract and Canal Ranch** *The areas cited in this mitigation measure are important foraging and roosting habitat for sandhill cranes. Therefore, construction activities near important foraging and roosting habitats at these locations will be prohibited from September 1 through March 15 each year unless, after coordination with the California Department of Fish and Game (DFG), the CPUC determines that construction activities can be allowed within this time period without significantly affecting the sandhill crane.*	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken.	CPUC and LGS	During project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Potential disturbance of active raptor and owl nests and tricolored blackbird nests *The Composite Route Alternative could potentially result in significant impacts on the tricolored blackbird and on raptors such as the northern harrier, white-tailed kite, burrowing owl, and short-eared owl if project construction would cause abandonment of several nests, nesting colonies, or the destruction of active nest sites.*	**Mitigation Measure 3.7-7: Conduct preconstruction surveys** *Preconstruction surveys will be conducted for tricolored blackbird, northern harrier, white-tailed kite, burrowing owl, and short-eared owl in the project area prior to proposed construction activities that occur between March 1 and August 31. A qualified biologist will survey suitable habitat for the presence of these nesting species along the pipeline alignment and the well pad sites. Where nest sites are identified or suspected to occur during preconstruction surveys, the qualified biologist will establish buffer zones around the nest to avoid significant impacts on these species. A 200-foot buffer zone will be established around active tricolored blackbird, northern harrier, white-tailed kite, and short-eared owl nests. No construction activities will occur within this buffer until the young have fledged or the species are no longer attempting to nest.*	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken.	CPUC and LGS	Prior to and during project construction.
Loss of or disturbance to nesting western burrowing owls *Disturbance of nesting western burrowing owls, a state species of special concern and a federal species of concern, during construction could cause nest abandonment or force nestlings to fledge early, which could result in mortality.*	**Mitigation Measure 3.7-8: Consult with CDFG and follow CDFG's burrowing owl mitigation guidelines** *If an active burrowing owl burrow (nesting or winter roosting) is found or reported to exist within 500 feet of the pipeline construction corridor during the raptor surveys, CDFG will be consulted. If an active burrowing owl burrow cannot be avoided during construction, the project proponent will consult with CDFG regarding the appropriate mitigation measures.*	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken.	CPUC and LGS	Prior to and during project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Construction activities may cause the reproductive failure of nesting Swainson's hawks *Construction activities near an active Swainson's hawks nest could directly cause reproductive failure by removing the nest tree, causing adults to abandon the nest, or forcing young to leave the nest prematurely.*	**Mitigation Measure 3.7-9: Conduct preconstruction surveys for nesting Swainson's hawks and follow CDFG's mitigation guidelines for Swainson's hawks** *Before construction activities are conducted between March 15 and September 15, preconstruction surveys for nesting Swainson=s hawks will be conducted within 0.5 mile of the project area. If nesting Swainson=s hawks are found, the project proponent will consult with the CDFG to determine if construction activities could cause reproductive failure. CDFG may require that no construction activities be allowed within 0.5 mile from the nest site until young have fledged or the adults are no longer nesting. However, construction may be allowed within 0.5 mile of the nest if a biologist monitors the nest to determine whether the adults may abandon the nest.*	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken.	CPUC and LGS	Prior to and during project construction.
Construction activities may cause the reproductive failure of nesting swallows and herons *The Composite Route Alternative could potentially result in significant impacts on nesting swallows occurring under bridge structures and nesting herons in tall, mature trees. Because swallows are migratory and protected under the Migratory Bird Treaty Act, and heron rookeries are considered a special-status resource by CDFG, construction-related disturbances that cause nesting failure would be considered a significant impact.*	**Mitigation Measure 3.7-10: Conduct preconstruction surveys for nesting swallows and herons and establish appropriate buffer zones around nests** *Preconstruction surveys will be conducted for nesting swallows and herons in the project area prior to construction activities when construction is proposed between March 15 and August 31. A qualified biologist will survey suitable nesting habitat for the presence of these nesting species along the pipeline and well pad sites. The biologist will be required to drive or walk along the pipeline alignment and well pad sites in and near suitable habitat types in the project area and inspect the habitats for nesting swallows and herons. Where nest sites are identified during preconstruction surveys, the qualified biologist will establish buffer zones around the nest sites and no project construction activities will occur within these buffer zones.*	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken.	CPUC	Prior to and during project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
		PUBLIC HEALTH AND SAFETY		
Potential peat fire hazard during pipeline construction *In the Delta portion of the pipeline alignment, the pipe would be buried in peat soils that are combustible. There is a slight possibility that pipeline joint preparation and welding of the pipeline may initiate a peat fire causing harmful air emissions and damage to property.*	**Mitigation Measure 3.9-1: Develop and implement a peat fire prevention plan** *The project Applicant shall develop and implement a peat fire prevention plan in addition to the fire protection plan required by the U.S. Department of Transportation Office of Pipeline Safety. The plan shall be developed in consultation with the State Fire Marshall or other responsible fire-fighting agencies. The plan shall include specific measures to prevent ignition and spread of a peat fire.*	LGS will submit a peat fire prevention plan to CPUC. CPUC will monitor construction activities to ensure compliance with the plan.	CPUC	Active construction areas will be patrolled daily.
		NOISE		
Exposure of noise sensitive land uses to noise from construction activities other than well drilling *Construction of the well pad sites, separator facility, compressor facility, and installation of pipelines would result in temporary increases in noise in the area of construction activity. Primary noise-generating activities would include excavation, grading, scraping, and compaction activities. Noise increases from pipeline installation would typically last no more than a day. Noise from construction of other facilities would occur over several weeks. Construction noise could exceed 57 dBA*	**Mitigation Measure 3.10-1: Employ noise-reducing practices to reduce construction noise** *The project Applicant shall notify owners of all residential and other noise-sensitive properties within 3,000 feet of proposed construction sites that construction will be occurring at the site. A notification packet shall be sent to the property owners that identifies the intended construction schedule, the duration of noise-generating construction activities, and a telephone number to call with noise complaints. Notification packets shall be sent to property owners at least 30 days before the commencement of construction activity within 3,000 feet of the owners= property. The construction contract specifications shall also include: Sound-control devices on all equipment, no equipment with unmuffled exhaust, and maintenance and operation of equipment to minimize noise generation and appropriate additional noise mitigation measures as directed by the CPUC.*	Construction activities will be monitored daily to ensure compliance with this mitigation measure. LGS will provide CPUC with documentation clearly indicating compliance with the mailing requirements of this measure. LGS will also provide weekly reports to CPUC regarding the number of noise complaints received on the telephone hotline and how each complaint was addressed.	CPUC	Monitoring will occur throughout project construction.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
within about 2,000 feet of an active construction site. Numerous residences are located within this distance along the pipeline alignment, and several residences are located within this distance near the well sites, separator facility, and compressor facility sites.				
Exposure of noise-sensitive land uses to noise from drilling activities *Well drilling would be conducted on a 24-hour basis for approximately 12 weeks. Well drilling is considered a construction activity that is exempt from the San Joaquin County Noise Ordinance between 7:00 a.m. and 7:00 p.m. Monday through Saturday. Several residences are located within 2,000 feet of the well sites. The potential exists for these residences to be exposed to substantial increases in noise as well as noise exceeding the San Joaquin County Noise Ordinance as a result of well-drilling activities.*	**Mitigation Measure 3.10-2: Restrict the hours of noisiest activities, install noise-reducing barriers around drilling sites, and employ other noise-reducing "best management practices" to reduce drilling noise** *Other project construction activities are limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. However, well drilling has unique requirements that are different from those of other construction activities. Certain activities (such as circulating drilling mud) must occur continuously to ensure safety and minimize the potential for failure of the drill hole. To minimize noise impacts from well-drilling activities, the Applicant and the construction contractor shall limit the hours of the most noise-producing well-drilling activities to these hours and employ other noise-reducing construction practices. The Applicant shall notify owners of all residential and other noise-sensitive properties within 2,000 feet of proposed well sites that construction will be occurring at the site. A notification packet shall be sent to the property owners that identifies the intended construction schedule, the duration of noise-generating construction activities, and a telephone number to call with noise complaints. Notification packets shall be sent to property owners at least 30 days before the commencement of well-drilling activity within 2,000 feet of the*	Well-drilling activities will be monitored twice each week to ensure compliance with this mitigation measure. Noise monitoring locations will be established by the CPUC. The Applicant and CPUC will meet weekly to coordinate well-drilling activities and determine which measures should apply at each well-drilling site prior to the initiation of well-drilling activities at that site. LGS will provide the CPUC with documentation clearly indicating compliance with the mailing requirements of this measure. LGS will also provide weekly reports to CPUC regarding the number of noise complaints received on the telephone hotline and how each complaint was addressed.	CPUC and LGS	Monitoring will occur during well-drilling activities.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
	owners' property. *If, after all reasonable and practicable attempts to reduce noise have been attempted, nighttime noise levels remain above the significance threshold (5-dBA increase above ambient levels at nearby residences), the Applicant shall be required by the CPUC to offer temporary relocation assistance to affected residents. The Applicant shall employ noise-reducing measures to reduce noise from well-drilling activities.*			
Exposure of noise-sensitive land uses to noise from operation of the compressor facility *Although infrequent (once every 5-10 years), emergency depressurization would result in noise levels that exceed significant thresholds.*	**Mitigation Measure 3.10-3: Minimize the occurrence of emergency depressurization events** *LGS will notify the CPUC within 24 hours of each emergency depressurization event. If emergency depressurization occurs more than once in any 3-year period, LGS will take appropriate measures to ensure that the frequency is reduced. Such measures include, but are not limited to, modifying compressor facilities, modifying compressor operations, and potentially ceasing operations until the CPUC is satisfied that the frequency of emergency depressurization events is substantially reduced. LGS will comply with measures required by the CPUC to the extent that such measures are not in conflict with requirements of other local, state, and federal agencies.*	CPUC will monitor the frequency of depressurization events to ensure the Applicant's compliance with this measure.	LGS and CPUC	Throughout the life of the project.
PUBLIC SERVICES AND SOCIOECONOMICS				
Temporary increase in demand for emergency response in the project area *The proposed project has the potential to result in a minor increase in the demand for emergency and fire services.*	**Mitigation Measure 3.11-1: Provide appropriate equipment and training to local fire agencies** *The Applicant shall work closely with local fire districts to familiarize them with the project before project construction begins and also before project operations begin. LGS will familiarize fire department personnel*	CPUC will ensure that LGS holds the meetings described above at the appropriate times during project construction and operation. CPUC will review annual reports provided by LGS to ensure that appropriate training and drills are being conducted.	CPUC and LGS	Monitoring will occur throughout construction and operation of the project.

Impact	Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
	with project facilities, assist in providing training for local fire department personnel to respond to emergencies involving pipelines and natural gas facilities, and provide equipment as necessary and reasonable to respond to potential emergencies at project facilities. LGS will meet with local fire district personnel, emergency medical services providers, and law enforcement agencies during project construction to familiarize them with the various control and safety systems designed into project facilities, and the emergency procedures that LGS will implement. These protocols will include notification lists of residents in the immediate vicinity of project facilities. *Meetings between LGS and the emergency response providers and local law enforcement personnel will be conducted on an annual basis as needed, to train new personnel. LGS will also coordinate with these agencies to conduct annual drills simulating various emergency conditions. LGS will submit annual reports to the CPUC describing training that was conducted each year.*			

Impact	Mitigation Monitoring Procedure	Monitoring / ction	Responsibility	Timing
VISUAL RESOURCES				
Potential to degrade the existing visual character of the site *Several of the project facilities (those associated with well pad and injection sites, the separation facility, the compressor/dehydration facility, PG&E Line 401 and Line 196 Interconnect and Meter Stations, and pipeline construction) are large or close enough to sensitive viewers that they may degrade the visual character of the site. The project proponent has agreed to implement several measures as part of the project to minimize disturbance of the visual character of the site. However, the potential for significant visual impacts at the aboveground project facility sites still remains.*	**Mitigation Measure 3.12-1: Develop and implement landscaping and site design plan** *In consultation with San Joaquin County Department, and subject to the approval of CPUC, LGS will develop and implement a landscaping and site design plan for the well pad, separation facility, and compressor facilities, which includes, but is not limited to, consideration of the following elements: 1) reducing the profile of the compressor facility by undergrounding a portion of the facility and using the excavated material to create a berm to serve as a partial screen and a landscaping base around the structures; 2) using evergreen trees and shrubs at a sufficient density to establish an effective landscape buffer around project facilities; 3) planting the landscaping buffer prior to construction to facilitate the rapid establishment of a mature landscape buffer around project facilities; 4) identifying performance criteria for the successful establishment of landscape vegetation; and 5) developing a long-term maintenance program to ensure plant survivorship.*	LGS will submit a landscaping and site design plan to CPUC for review and approval. CPUC will monitor the landscaping plan following completed installation of all plantings to ensure compliance with the plan. LGS will conduct annual monitoring of facility landscaping for 10 years after installation and submit annual monitoring reports to CPUC.	CPUC and LGS	Monitoring should occur after all facility landscaping has been installed, and thereafter annually for a period of 10 years.

(END OF ATTACHMENT C)

ATTACHMENT D

(15 pages)

TABLE 5-1
LODI GAS STORAGE PROJECT
DRAFT MITIGATION MONITORING PLAN—MITIGATION MEASURES PROPOSED BY THE APPLICANT

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
CONSTRUCTION MEASURES			
Land Use/Agriculture			
LGS will prepare and implement a Site Restoration Plan that will specifically address site enhancement and restoration activities, regrading, repair and/or replacement of irrigation or drainage systems, control of soil erosion, and treatment for soil compaction.	LGS will submit a Site Restoration Plan to CPUC for review and approval before project construction. CPUC will monitor construction activities to ensure compliance with the plan	LGS and CPUC	The Site Restoration Plan shall be submitted to CPUC before the start of construction. Monitoring will occur during the restoration phase of the project as necessary.
Topsoil removed during construction will be stockpiled separately and spread over disturbed areas during replanting. Stockpiled topsoil will be tested for toxicity (hydrocarbons), phylloxera, and nutrient content (nitrogen and phosphorous) prior to use.	LGS will notify CPUC when soils tests identify potential issues before use. CPUC will monitor topsoil handling during project construction and site restoration activities.	LGS and CPUC	CPUC will monitor topsoil handling during the construction and site restoration phases of the project.
LGS will restore the land surface to pre-project condition if and when the project is abandoned in accordance with the terms of agreements with individual landowners.	LGS will provide CPUC with copies of all agreements with landowners that permit construction on private property. If and when LGS abandons the project, CPUC will monitor abandonment activities to ensure compliance with landowner agreements.	LGS and CPUC	CPUC will monitor abandonment activities during the abandonment phase of the project as necessary
LGS will prepare and implement a pipeline installation plan that addresses the depth of pipeline installation for each property. LGS proposes to cover the pipeline with a minimum of 4 feet of soil in non-row crop/vineyard use, and deeper where required by landowner negotiations. All trenches will be backfilled and soil compacted to its original density, as is practical.	LGS will submit the pipeline installation plan to CPUC for review and approval. CPUC will monitor construction activities to ensure compliance with the plan.	LGS and CPUC	The pipeline installation plan shall be submitted to CPUC before the start of construction. Monitoring will occur during the construction phase of the project.

ATTACHMENT D
Page 1

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
LGS will require the construction contractor through bid specifications to provide breaks in spoil piles, trench, or pipe strings to accommodate field access during construction.	LGS will provide final bid specifications to CPUC for review and approval to ensure that this measure is properly incorporated into construction specifications.	LGS and CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
LGS will schedule construction to avoid interference with agricultural practices, to the extent feasible, including but not limited to, cultivation, irrigation, and harvesting.	LGS will submit a detailed construction schedule to CPUC for review and approval. CPUC will monitor construction activities to ensure compliance with the approved schedule.	LGS and CPUC	Prior to and during construction.
Water Quality			
LGS will obtain and comply with the terms of project-specific Storm Water Pollution Prevention Plans developed in accordance with the Clean Water Act under the State Water Resources Control Board's National Pollutant Discharge Elimination System General Permits for storm water discharge during construction.	LGS will provide CPUC with a copy of the project-specific storm water pollution prevention plan. CPUC will monitor construction activities to ensure compliance with the plan.	LGS and CPUC	Monitoring will occur during the entire construction phase of the project.
Structural and operational "Best Management Practices" will be employed where necessary to minimize water quality impacts associated with construction and industrial operations.	LGS will provide CPUC with a copy of the Best Management Practices to be used during project construction and operation. CPUC will monitor construction and operation activities to ensure compliance with these measures.	LGS and CPUC	Monitoring will occur during the construction and operation phases of the project.
Visual monitoring of runoff water quality and quantitative analytical testing of runoff samples will be used to identify potential impacts, and corrective measures will be implemented, if necessary.	CPUC will visually monitor the water quality of runoff and review analytical testing of runoff. CPUC and LGS will identify corrective actions as necessary to maintain appropriate water quality	CPUC and LGS	Monitoring will occur during the entire construction phase of the project as necessary.
Bid specifications will require construction contractors to handle hazardous materials and wastes in accordance to best management practices prescribed in the Storm Water Pollution Prevention Plan.	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Hazardous waste will be handled in accordance with all applicable manufacturers' specifications for storage and handling, and in compliance with applicable local, state and federal requirements.	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications. CPUC will monitor construction activities to ensure compliance.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications. CPUC will monitor compliance during construction.
Air Quality			
LGS will prepare and implement a dust control plan consistent with local air district requirements to reduce PM10 emissions.	LGS will submit a copy of the dust control plan to CPUC. CPUC will monitor construction activities to ensure compliance with the plan.	CPUC	Monitoring will occur during the entire construction phase of the project as necessary.
Traffic and Circulation			
LGS will include the following commitments in bid specifications. The project will use specific design features including minimizing peak hour traffic and congestion by adopting the following plan: • No lane closures will occur in major signalized intersections during weekday peak hours (6:00 a.m.-9:30 a.m., and 3:30 p.m.-6:00 p.m.). • The construction contractor will provide van/carpool service to shuttle construction workers (except welders) from offsite parking areas. LGS will encourage workers to carpool. • LGS will require the construction contractor to work with San Joaquin and Sacramento County Public Works Departments on timing and route selection for heavy equipment and truck traffic on county roads. • LGS will utilize horizontal boring and hammering techniques at road and rail line crossings and directional drilling at major waterway crossings.	LGS will provide final bid specifications to CPUC for review and approval to ensure that these measures are properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Biological Resources			
Swainson's Hawk			
Swainson's hawk surveys will be conducted to locate any nests within 0.5 mile or line-of-sight of the project area, whichever is less.	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit survey results to CPUC.	CPUC and LGS	Monitoring will be conducted before and during project construction.
If active nests are located within 0.5 mile of the project, construction activities in the area may be modified following consultation with the California Department of Fish and Game (CDFG).	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit CDFG approval to CPUC.	CPUC and LGS	Monitoring will be conducted before and during project construction.
If necessary, construction will be delayed in the area of the nest until the chicks have fledged.	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit evidenced compliance to CPUC.	CPUC and LGS	Monitoring will be conducted before and during project construction.
Tricolored Blackbird			
Surveys for active tricolored blackbird colonies will be made within 60 days prior to construction.	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit survey results to CPUC.	CPUC and LGS	Monitoring will be conducted before and during project construction.
If active nests are found within 100-feet of the project area, the CDFG will be contacted for directions on how to handle specific situations.	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit CDFG approval to CPUC, if necessary.	CPUC and LGS	Monitoring will be conducted before and during project construction.
If necessary, construction will be delayed in the area of the nests until the chicks have fledged.	Ensure that appropriate surveys are conducted, survey results received, and mitigation actions taken. LGS will submit evidence of compliance to CPUC.	CPUC and LGS	Monitoring will be conducted before and during project construction.
Giant Garter Snake			
Construction adjacent to or through irrigation ditches will be scheduled to allow ditch inspection by a qualified biologist immediately prior to construction to confirm that no giant garter snakes are present. Daily inspections will be conducted prior to the start of construction during each day construction activities are conducted at these sites, and any giant garter snake found will be moved a safe distance from the construction area.	LGS will be required to notify CPUC immediately if any giant garter snakes are found. CPUC will review the information provided by the project proponent and require appropriate action depending on its findings.	LGS and CPUC	Daily inspections will be conducted by a biologist before the start of construction activities at all water crossing sites.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
For all ditches and channels that will be trenched during the late summer dry season, the following mitigation measures will be implemented:	CPUC will review the information provided by the project proponent and require appropriate action depending on its findings.	LGS and CPUC	Monitoring will occur before and during project construction.
• Just prior to construction, the area will be surveyed for special-status species by a qualified biologist. The biologist will monitor construction near canals to ensure that no special-status species re-enter the area. Periodically, the biologist will check the open trenches to ensure that no giant garter snakes are trapped.	CPUC will review the information provided by the project proponent and require appropriate action depending on its findings.	LGS and CPUC	Monitoring will occur before and during project construction.
• Any sensitive species that are found will be relocated to suitable habitat outside the project area.	CPUC will review the information provided by the project proponent and require appropriate action depending on its findings.	LGS and CPUC	Monitoring will occur before and during project construction.
• Immediately following construction, the disturbed site will be restored to its original contour.	Ensure that appropriate language is included in bid specifications and that contractors comply with these requirements.	CPUC	Monitoring will occur during development of bid specifications and during project construction.
• All workers will attend a Worker Environmental Training that will discuss identification, mitigation measures, and their responsibilities regarding the giant garter snake and other sensitive species found in the project area.	Ensure that appropriate language is included in bid specifications and that contractors comply with these requirements.	CPUC	Monitoring will occur during development of bid specifications and during project construction.
General Measures			
LGS will restrict refueling and hazardous materials storage to areas further than 100 feet from riparian areas and drainage ditches.	Ensure that appropriate language is included in bid specifications and that contractors comply with these requirements. LGS will submit bid specifications to CPUC prior to release.	CPUC and LGS	Monitoring will occur during development of bid specifications and during project construction.
LGS will clearly mark the border of construction right-of-way to contain construction activities.	CPUC will monitor to ensure compliance with this measure. LGS will submit bid specifications to CPUC prior to release.	CPUC	Monitoring will occur during the entire construction phase of the project as necessary.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
In order to minimize the spread of noxious weeds, all construction equipment brought in from out-of-state will be cleaned of soil or mud that may contain weed seeds before being brought to the project site.	Ensure that appropriate language is included in bid specifications and that contractors comply with these requirements.	CPUC and LGS	Monitoring will occur during development of bid specifications and during project construction.
Public Health and Safety			
LGS will develop and implement an emergency response procedure for all facilities.	LGS will submit an emergency response plan to CPUC and local emergency response providers for review and approval. CPUC will monitor during project operation to ensure compliance with the plan.	LGS and CPUC	The emergency response plan shall be submitted to CPUC and local emergency response providers before project operation. Monitoring will occur during project operation as necessary.
During construction, hazardous materials and wastes will be handled in accordance with best management practices prescribed in the Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System General Construction Activities Storm Water Discharge Permit (see Water Quality).	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Hazardous wastes generated by the project will be recycled, if possible, or disposed of by a permitted hazardous waste treatment, storage, and disposal facility.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Secondary containment facilities that provide 110 percent of storage tank capacity will be provided for all hazardous materials storage tanks.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Bid specifications will require construction contractors to submit a Fire Prevention Plan.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Noise			
Pipeline Construction			
Pipeline construction could generate significant noise impacts. Potential significant impacts may also occur at one residence near the separator facility. LGS will implement the following measures to reduce noise levels in the vicinity of residences and minimize impacts during construction:			
All residential and other noise-sensitive land uses within 600 feet of the proposed construction site will be notified in advance of the intended construction schedule. The notification packet provided to local noise-sensitive receivers will include such information as a telephone number to call with noise complaints, as well as a proposed schedule of construction activities describing the nature and duration of noise-generating construction activities in the area.	Construction activities will be monitored daily to ensure compliance with this mitigation measure. LGS will provide CPUC with documentation clearly indicating compliance with the mailing requirements of this measure.	CPUC	Monitoring will occur throughout project construction.
Project specific design features that further reduce the impact from noise include limiting pipeline and facility construction from 7:00 a.m. to 7:00 p.m., Monday through Saturday, as allowed by the San Joaquin County Noise Ordinance.	Construction activities will be monitored daily to ensure compliance with this mitigation measure.	CPUC	Monitoring will occur throughout project construction.
A portable noise barrier will be used in areas where pipeline construction comes within 200 feet of residences.	Construction activities will be monitored daily to ensure compliance with this mitigation measure.	CPUC	Monitoring will occur throughout project construction.
All construction equipment will be operated and maintained to minimize noise generation. Equipment and vehicles will be kept in good repair and fitted with "manufacturer-recommended" mufflers.	Construction activities will be monitored daily to ensure compliance with this mitigation measure.	CPUC	Monitoring will occur throughout project construction.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Maintenance will be conducted at least 650 feet from residences except under emergency conditions.	Construction activities will be monitored daily to ensure compliance with this mitigation measure.	CPUC	Monitoring will occur throughout project construction.
Enclosures will be provided for any noise-producing stationary sources (e.g., generators used for night lighting).	Construction activities will be monitored daily to ensure compliance with this mitigation measure.	CPUC	Monitoring will occur throughout project construction.
Well Drilling			
Noise barriers will be installed in strategic location around each drill pad to reduce noise levels at nearby residences to levels consistent with applicable county requirements.	Construction activities will be monitored daily to ensure compliance with this measure.	CPUC	Monitoring will occur throughout project construction.
Construction of a noise barrier will provide consistency with the San Joaquin County Noise Ordinance at all but 9 residences for nighttime drilling, and all but 6 residences for daytime drilling. One or more of the following measures will provide additional noise reduction at these residences:			
Selection of well drilling equipment that has a lower acoustic height and lower sound level than the equipment assumed for the noise analysis.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Increase the height of the noise barrier.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Place additional noise barriers at strategic locations on the property of the affected residence.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
In the event that noise levels consistent with the San Joaquin County Noise Ordinance cannot be achieved at any residence, LGS in consultation with the affected resident(s) will offer to temporarily relocate affected resident(s) at its expense during drilling activities or provide other mutually acceptable solutions.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Visual Resources			
LGS will minimize ground disturbance to reduce contrast between exposed soils and naturally vegetated areas, thus reducing impacts to viewers.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
LGS will limit the clearing of trees and vegetation for the project to the minimum area required.	LGS will provide final bid specifications to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Cultural Resources			
A team of qualified archaeologists will conduct a surface survey of 100% of the area affected by the pipeline construction following centerline staking and prior to right of way grading activities. If any indication of a cultural resource is identified, a plan for pipeline realignment or resource recovery will be developed and implemented through consultation between LGS, CPUC, and the State Historic Preservation Officer.	LGS will consult with CPUC if any artifacts are discovered.	LGS and CPUC	Prior to and during construction.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
If the pre-construction survey identifies areas of suspected cultural resources or potential high sensitivity, a qualified archaeologist will monitor all construction activities in these areas. In the event cultural resources are encountered during construction, the construction manager will stop work in the vicinity of these resources upon notification by the monitoring archaeologist.	LGS will monitor such areas during construction and report any finds to CPUC immediately.	LGS and CPUC	Prior to and during construction
Work will only proceed at the authorization of CPUC in accordance with consultation with the State Historic Preservation Officer and implementation of any required treatment.	LGS will provide CPUC with evidence of approval by the State Historic Preservation Offices prior to continuing construction.	LGS and CPUC	During project construction.
Artifacts recovered during construction will be returned to Native Americans or curated at an appropriate museum as required by the State Historic Preservation Officer.	LGS will record and document artifacts and provide CPUC with State Historic Preservation Offices approved plan.	LGS and CPUC	After completion of construction
TESTING PHASE			
Hydrostatic testing of the pipeline is required by regulatory agencies and normal engineering and construction procedures. Control and mitigation measures during hydrostatic testing would include the following: • The testing program will be designed to allow for pumping rates which are hydraulically insignificant for each water source, and which will minimize any potential channel erosion. • Intake screens will be provided and flow rates will be low to minimize effects on aquatic species. • Sediment will be removed prior to discharge of water on completion of testing.	LGS will provide CPUC with evidence that it has complied with the requirements of the National Pollutant Discharge Elimination System permit for the project, which requires hydrostatic testing.	CPUC	Monitoring will occur during the testing phase of the project.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
• Water used for testing will be sampled and analyzed for chemical constituents of concern prior to discharge. • Water to be discharged will be pre-treated or disposed of off-site if permitted constituent concentration limits would be exceeded. • Discharge flow rates will be controlled to provide discharge rates that will not exceed the hydraulic capacity of each channel, cause unacceptable channel erosion, or increase suspended sediment beyond acceptable levels.			
OPERATION MEASURES			
Visual Resources			
Vegetative landscaping will be used to screen aboveground facility components.	LGS will provide final landscape plan to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications for landscaping will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Equipment and facilities will be painted in non-glare earth tones.	LGS will provide final bid specifications for facility painting, to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Shielded, non-glare lighting will be used at facilities.	LGS will provide final lighting plan to CPUC for review and approval to ensure that the measure is properly incorporated into construction specifications.	CPUC	Bid specifications for lighting and fixtures will be provided to CPUC before they are released for bid. CPUC will provide comments within 2 weeks following receipt of the specifications.
Water Quality/Hazardous Materials			
Waste will be stored at the site in enclosed, secured areas for a maximum of 90 days, until removed by licensed hazardous waste transporters for management at permitted Treatment, Storage and Disposal (TSD) facilities.	Project operation will be monitored weekly to ensure compliance with this measure.	CPUC	Monitoring will occur weekly during project operation.
Where appropriate, waste will be recycled by a licensed facility.	Project operation will be monitored weekly to ensure compliance with this measure.	CPUC	Monitoring will occur weekly during project operation.
LGS will prepare a Hazardous Materials Release Response Plan, consistent with the requirements of Section 25500 of the California Health and Safety Code, and submit it for approval for the operation of the project. It is expected that San Joaquin County will coordinate the review of this plan with the local fire departments and other appropriate agencies. The plan will identify the types of hazardous materials stored or used, types of wastes generated, and storage and disposal requirements. This plan will also identify employee training requirements and emergency response requirements and procedures in case of a spill or accident involving hazardous material or wastes.	LGS will submit a Hazardous Materials Release Response Plan to CPUC before project operation. CPUC will monitor project operation to ensure compliance with the plan.	LGS and CPUC	The Hazardous Materials Release Response Plan shall be submitted to CPUC before project operation. Monitoring will occur during the operation phase of the project as necessary.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Groundwater Quality			
LGS will implement a groundwater monitoring program by developing groundwater monitoring wells immediately above the storage field. Monitoring wells will be developed at locations recommended by a qualified geologist and by mutual agreement with affected landowners.	CPUC will inspect project to ensure installation of monitoring wells.	LGS and CPUC	Monitoring wells will be developed prior to the time other wells are developed.
LGS will sample and analyze groundwater prior to drilling any injection/withdrawal or observation wells to establish baseline conditions.	LGS and CPUC will agree on constituents for testing prior to initiation of the testing program. LGS will provide the results of water sampling to CPUC within 60 days of sampling.	LGS and CPUC	Prior to initiation of any project operations or injection/withdrawal or observation wells.
LGS will sample and analyze groundwater 30 days after the completion of the drilling of injection/withdrawal or observation wells and every six months thereafter	LGS will provide groundwater quality data to CPUC within 30 days of each testing period.	LGS and CPUC	During the life of the project.
LGS will provide sampling containers to landowners/tenants with groundwater wells located above the storage field for biannual independent laboratory testing. LGS will pay all costs associated with sampling containers, laboratory analysis and shipping.	LGS will provide groundwater quality data to landowners/tenants within 30 days of each testing period.	LGS and CPUC	Biannually during the life of the project.
Results of all groundwater monitoring analyses will be mailed directly from the laboratory to the affected landowners and the CPUC.	See above	LGS	See above

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
Noise			
The separator and compressor facilities will be designed and operated in such a manner as to ensure that noise levels at the nearest sensitive receptors does not exceed 45 dBA. The following measures will be implemented: • Select the quietest equipment practical. • Place noise-generating equipment as far from the property line as possible. • Place non-noise generating equipment and structures between a noise source and the property line, where practical. • Orient exhaust vents away from property lines. Equipment that generates "directional" noise should be oriented such that the side generating the most noise faces away from the property line and receptors, where practical. • Use noise barriers such as walls and earthen berms as necessary. • Use acoustical shielding by enclosures as necessary to reduce noise from equipment such as pumps and generators.	CPUC will review and approve the design before construction of the separation and compressor facilities. CPUC will also review and approve the post-construction monitoring plan developed by LGS. CPUC will require remedial measures if noise standards are exceeded.	LGS and CPUC	Designs will be approved by CPUC before construction. Noise monitoring and any remediation will occur after completion of construction.
Air Quality			
LGS will use Best Available Control Technologies for all emissions from all facilities.	LGS will provide CPUC with evidence of approval from the District that acceptable BACT has been incorporated into the project.	LGS and CPUC	Prior to construction.

Mitigation Monitoring Procedure	Monitoring Action	Responsibility	Timing
LGS will install additional post combustion exhaust gas scrubbing equipment including carbon monoxide oxidation catalysts to further reduce exhaust emissions.	LGS will provide CPUC with design drawings indicating compliance.	LGS and CPUC	Prior to construction.

(END OF ATTACHMENT D)

ATTACHMENT E

(6 pages)

INTERCONNECTION PRINCIPLES AGREED TO BY LODI GAS STORAGE INC. AND PACIFIC GAS AND ELECTRIC CO.

INTERCONNECTION FACILITIES

Facilities for an interconnection of Lodi Gas Storage, Inc. ("LGS") to Pacific Gas and Electric Company's ("PG&E") Line 196 are set forth in Exhibit A, hereto. Facilities for an interconnection of LGS storage field to PG&E's Line 401 are set forth in Exhibit B, hereto.

Under PG&E's Gas Rule 2, Standard Facilities are designed by PG&E for delivery of gas to customers at PG&E's adopted standard delivery pressure of seven inches of water column. For customers requesting higher than standard delivery pressure, PG&E may, at its option, design special facilities, specific to a customer's connected load needs, for delivery of gas at a pressure higher than standard delivery pressure where such higher pressure is available from existing facilities at the point at which a customer's facilities interconnect with PG&E's facilities (Interconnection Point).

Standard Facilities:

1. The Parties agree that for the purpose of identifying Standard Facilities for the Lodi Gas Storage field, a customer load comparable to the gas volumes flowing through the Interconnection Points would be a transmission customer:

   a) with gas usage equal to the injection capabilities of the LGS storage facility in the amount of 55 MMcf/day and for delivery service at existing pressure at an Interconnection Point proposed for PG&E's Line 196, and,

   b) with gas usage equal to injection capabilities in the amount of 400 MMcf/day for delivery service at existing pressure at an Interconnection Point proposed for PG&E's Line 401.

2. Accordingly, the Standard Facilities required for the LGS storage facility are those listed in the attached Exhibits A and B (Design Criteria, Item 2). The Design Criteria utilized here for the interconnection facilities are not a guarantee of PG&E system capabilities for injection or withdrawal. PG&E system capabilities are the subject of testimony filed in A. 98-11-012 by PG&E and LGS.

3. PG&E has used reasonable care in determining the minimum pressure currently available, and what is expected to be available in the foreseeable future, for designing Standard Facilities at either Interconnection Point. PG&E does not guarantee pressure above seven inches water column to any customer, including those customers requiring higher pressure than Gas Rule 2 standard delivery pressure. PG&E will attempt to provide LGS adequate notice of any proposed reduction in pressure higher than seven inches water column; however conditions at the time may not permit advance notification. In any event, PG&E, its directors, officers, agents and employees will not be held responsible for any damage,

loss or expense in any way from a reduction to a delivery pressure not less than PG&E's standard delivery pressure.

Special Facilities:

1. Special Facilities are those facilities that are (1) necessary to provide an applicant the service it requests; and (2) are in addition to or in substitution for Standard Facilities.

2. The Special Facilities which PG&E has identified to date as necessary for either interconnection of the LGS storage facility are listed in the attached Exhibits A (for deliveries at 325 to 800 psig) and B (for deliveries ranging from 600 to 975 psig) (Design Criteria, Item 3).

3. The Parties agree that future changes to the required Special Facilities may be identified as a result of the final engineering design. Additional Special Facilities that are identified by PG&E after the final engineering design shall be agreed upon by LGS and PG&E.

Special Facilities as Upgrades to Existing System Facilities:

1. The Special Facilities as Upgrades to Existing System Facilities currently identified for the interconnection of the LGS storage facility are listed in the attached Exhibits A and B (Design Criteria, Item 4).

[redacted]

1. Standard Facilities - The cost of the Standard Facilities to be installed pursuant to these Interconnection Principles shall be borne by LGS, as implemented by PG&E's Gas Rules and tariffs (consistent with Decision 97-12-098) applicable to gas transportation customers having similar loads, and pursuant to California Public Utilities Commission Decision 93-02-013.

2. Special Facilities - LGS shall bear the cost of all Special Facilities identified in Exhibits A and B, Item 3, Special Facilities, which are upgrades to existing System Facilities identified in Exhibits A and B, Item 4, and any additional Special Facilities identified and agreed as provided for herein.

Exhibit A
Design Criteria
Lodi Gas Storage Interconnection
Line 196 Tie-in Alternative
May 12, 1999

1 General

1.1 This document generally describes Standard Facilities and Special Facilities, as discussed in PG&E's Gas Rules, to interconnect the Lodi Gas Storage (LGS) Field to the PG&E system at Line 196 near the existing Las Vinas Station. The list of facilities reflects information provided to PG&E by LGS as to its proposed storage facility design and withdrawal/injection capabilities. The criteria are complete as of the date above, but the list may be modified over the duration of the project due to operational and safety needs, and business needs or changes to the LGS facility as communicated to PG&E.

2 Standard Facilities[1] at Line 196, Las Vinas

2.1 Custody transfer quality metering facilities for 10 MMscf/d to 55 MMscf/d.

2.2 Design pressure, maximum allowable pressure: 800 psig.

2.3 Tie-in to existing 16-inch Line 196

2.4 100 feet of 8-inch diameter pipe

2.5 Manual isolation/hot tap valve on branch tap

2.6 Cathodic protection and insulating flange

2.7 Filter

2.8 Engineering and project management

3. Special Facilities at Line 196, Las Vinas

3.1 Custody transfer quality metering facilities for 10 to 205 MMscf/d. Metering shall be bi-directional with sufficient piping and valving to accurately measure injection and withdrawal flow rates. Estimated current minimum service pressure

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[1] The terms Standard and Special Facilities are terms in PG&E's tariffs. Use of the term "Standard Facilities" under item 2 above is based on the assumption that the Line 196 interconnect is the first interconnection between the Storage Field and PG&E's system. If the Line 196 interconnect is a subsequent and additional interconnect, then all facilities listed in item 2 are Special Facilities under PG&E's Gas Rule 2. If the Line 196 interconnection is a relocation or rearrangement of a previous interconnection, all costs associated with the relocation or rearrangement are the customer's responsibility in accordance with PG&E's tariffs.

Exhibit A
Design Criteria
Lodi Gas Storage Interconnection
Line 196 Tie-in Alternative
May 12, 1999

is 325 psig.

3.2 Design pressure, maximum allowable pressure: 800 psig.
3.3 Tie-in to existing 16-inch Line 196
3.4 100 feet of 16-inch diameter pipe from Line 196 to meter station
3.5 Manual isolation valve at tap
3.6 Blowdown piping
3.7. Automatic isolation block valve
3.8 Back pressure protection (provided by automatic isolation block valve)
3.9. Automation for remote operation
3.10. SCADA connection for remote monitoring
3.11 Cathodic protection and insulating flange
3.12. Civil work (concrete pads, shelter, etc.)
3.13. Gas instrumentation: gas chromatography, and flow computer.
3.14. Miscellaneous auxiliary systems (phone, power, etc.)
3.15. Engineering and project management

4. Other Special Facilities for Existing Facilities

4.1. Install separator at Tyler Island Separator Station
4.2. Install separator at Serpa Junction Compressor Station
4.3. Install meter, remote operated valve, monitor valve, and cross-tie at Creed Station
4.4. Program necessary system changes for administration of Lodi Gas Storage nominations
4.5. Modify SCADA system at Brentwood & Gas System Control
4.6. Install communication equipment at mountain top repeater stations

5. Line 196 - References

5.1. PG&E tariffs, gas rules
5.1.1. Rule 2 - Description of Services
5.1.2. Gas Rule 15 - Gas Main Extensions
5.1.3. Gas Rule 16 – Gas Service Extensions

Exhibit B
Design Criteria
Lodi Gas Storage Interconnection
Line 401 Tie-in Alternative
May 12, 1999

1 General

1.1 This document generally describes Standard and Special Facilities to interconnect the LGS Field to the PG&E system at Line 401 on Sherman Island. The list of facilities reflects information provided to PG&E by LGS as to its proposed storage facility design and withdrawal/injection capabilities. The criteria are complete as of the date above, but the list may be modified over the duration of the project due to operational and safety needs, and business needs or changes to the LGS facility as communicated to PG&E.

2 Standard Facilities[1] at Line 401, Sherman Island

2.1 Provide custody transfer quality metering facilities for 40 to 400 MMscf/d.

2.2 Design pressure, maximum allowable pressure: 975 psig.

2.3 Tie-in to 42-inch Line 401

2.4 100 feet of 16-inch pipe

2.5 Manual isolation/hot tap valve on branch tap

2.6 Cathodic protection and insulating flange

2.7 Filter

2.8 Engineering and project management

3. Special Facilities at Line 401, Sherman Island

3.1. Custody transfer quality metering facilities for 40 MMscf/d to 500 MMscf/d. Metering shall be bi-directional with sufficient piping and valving to accurately measure injection and withdrawal flow rates. Estimated current minimum service pressure is 600 psig.

3.2. Design pressure, maximum allowable pressure: 975 psig

3.3. Tie-in to 42-inch Line 401

3.4. 100 feet of 20-inch pipe from Line 401 to meter station

3.5. Blowdown piping

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[1] The terms Standard and Special Facilities are terms in PG&E's tariffs. Use of the term "Standard Facilities" under item 2 above is based on the assumption that the Line 401 interconnect is the first interconnection between the Storage Field and PG&E's system. If the Line 401 interconnect is a subsequent and additional interconnect, then all facilities listed in item 2 are Special Facilities under PG&E's Gas Rule 2. If the Line 401 interconnection is a relocation or rearrangement of a previous interconnection, all costs associated with the relocation or rearrangement are the customer's responsibility in accordance with PG&E's tariffs.

Exhibit B
Design Criteria
Lodi Gas Storage Interconnection
Line 401 Tie-in Alternative
May 12, 1999

3.6. Manual isolation valve at branch tap
3.7. Automatic isolation block valve
3.8 Back pressure protection (provided by automatic isolation block valve)
3.9. Automation for remote operation
3.10. SCADA connection for remote monitoring
3.11 Cathodic protection and insulating flange
3.12. Civil work (concrete pads, shelter, etc.)
3.13. Gas instrumentation: gas chromatography, and flow computer.
3.14. Miscellaneous auxiliary systems (phone, power, etc.)
3.15. Engineering and project management

4. Other Special Facilities for Existing Facilities

4.1. Program necessary system changes for administration of LGS nominations
4.2. Modify SCADA system at Brentwood & Gas System Control
4.3. Install communication equipment at mountain top repeater stations

5. Line 401 - References

5.1. PG&E tariffs, gas rules
5.1.1. Rule 2 - Description of Services
5.1.2. Gas Rule 15 - Gas Main Extensions
5.1.3. Gas Rule 16 – Gas Service Extensions

(END OF ATTACHMENT E)