
PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



March 23, 2012

Mr. Jim Kiefer
Director Project Development
Central Valley Gas Storage, LLC
3333 Warrenville Road, Suite 130
Lisle, Illinois 60532

Subject: Central Valley Natural Gas Storage Project – Request for Notice to Proceed with Commercial Operation of the Central Valley Gas Storage Project (Application No. 09.08.008).

Dear Mr. Kiefer:

Central Valley Natural Gas Storage has requested authorization from the California Public Utilities Commission (CPUC) to proceed with commercial operation of the Central Valley Gas Storage Project.

The Central Valley Natural Gas Storage project was evaluated in accordance with the California Environmental Quality Act and a Certification of Public Convenience and Necessity (CPCN) was granted by the CPUC on October 14, 2010 (Decision 10-10-001). **NTP #14 is granted by CPUC for the proposed operation activities based on the following factors:**

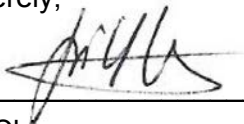
- The Mitigated Negative Declaration prepared for the Central Valley Gas Storage project defined required mitigation measures to be implemented prior to and during project construction and during the operations phase of the project. The relevant mitigation measures for operation of the Central Valley Gas Storage project are summarized in *Attachment A*. Central Valley's compliance with the operations-phase component for each measure is noted in the status table.
- All operations activity will be conducted in accordance with the mitigation measures included in the Final Initial Study/Mitigated Negative Declaration for the CVGS project site.

Jim Kiefer
March 20, 2012

The conditions noted below shall be met by Central Valley Gas Storage and its contractors:

- Consistent with APM AIR-4, a copy of the Implementation Plan developed as a part of the U.S. EPA's Natural Gas STAR Program shall be provided to the CPUC within 2 weeks after its submittal to the U.S. EPA. In addition, the annual report documenting emission reduction activities shall be provided to the CPUC within 45 days after the end of the first calendar year of operation.
- Central Valley shall comply with all applicable mitigation measures during project operation associated with this Notice to Proceed.

Sincerely,



Eric Chiang
CPUC Environmental Project Manager
Central Valley Gas Storage Project

cc: *D. Hochart, Dudek*
S. Eckardt, Dudek
S. Bushnell-Bergfalk, ICF
N. McIntire, Flour Inc.
H. Salvage, Flour Inc.

Att: *Attachment A – Mitigation Measures*

ATTACHMENT A
Mitigation Measures

**MITIGATION MONITORING, COMPLIANCE
AND REPORTING PROGRAM**

Central Valley Gas Storage Project

Attachment A – Mitigation Measures

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
Long term light and glare from facility lighting.	AES-3		All permanent outdoor site and building lighting at the compressor station, remote well pad site, and metering station site shall be directed at the ground and immediate area around the mounting pole or building wall. All permanent outdoor lighting shall be fully shielded such that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Poles used for site lighting shall not exceed a height of 35 feet.	Central Valley to implement measure as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications.	Post construction	Remote Well Pad Site Compressor Station Metering Station	Central Valley provided the Major Use Permit issued by Colusa County on January 28, 2011. The Major Use Permit conditions include measures to ensure that permanent outdoor site and building lighting shall be fully shielded and directed at the ground s and that poles shall not exceed a height of 35 feet.
Long-term light and glare from facility lighting.	AES-4		Observation and saltwater disposal well pad lighting and metering station lighting shall be used only as needed when the sites are accessed for monitoring or servicing.	Central Valley to implement measure during routine monitoring or servicing.	CPUC to ensure that commitments have been incorporated into routine monitoring and servicing manuals.	Post construction	Metering Station Remote Well Pad Site	Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for lighting during monitoring and servicing.
Potential for GHG emissions.	AIR-3	—	In addition to purchasing and retiring offsets for operational emissions under APM AIR-5, Central Valley will also purchase and retire offsets to cover the GHG emissions resulting from construction of the project as follows: (1) the project carbon offsets for the first year of operation shall include a minimum of 2,514 MTCO ₂ E, based on one-half of the total estimated construction emissions; and (2) the project carbon offsets for the second year of operation shall include the balance of 5,028 MTCO ₂ E of construction emissions. Because Central Valley has agreed to fully offset the construction emissions of the project within the first 2 years of project operation, there is no need to amortize the construction emissions over the life of the project for the purpose of accounting for these emissions. Project carbon offsets for the construction emissions shall be provided no later than those for the operational emissions as described in APM AIR-5. Central Valley shall conduct an annual GHG emission inventory of stationary sources (compressor engines, standby generator, natural draft burner, glycol reboilers, still vent,	Project carbon offsets for the construction emissions shall be provided to CPUC with a verification opinion statement(s), from the entity that certified the project carbon offsets or a verification body registered with the California Climate Action Reserve, American National Standards Institute (ANSI), or the California Air Resources Board (CARB).	CPUC ensure that project carbon credits have been purchased and retired and will review the independent verification opinion statement(s).	During operation; annual GHG emission inventory due to CPUC by March 31 of the following year.	All	Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for reporting GHG emissions and purchasing offsets. Central Valley will provide an annual GHG emissions inventory to the CPUC by March 31 st of year.

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			<p>and blowdown of natural gas) each year and report its findings to the CPUC by March 31 of the following year. Central Valley shall include in its annual GHG inventory an additional 50 MTCO₂E, which accounts for an estimated 50 MTCO₂E/year from non-stationary sources</p> <p>When the project carbon offsets from operational emissions (APM AIR-5) and construction emissions are retired, Central Valley shall provide to the CPUC a copy of the verification opinion statement(s) by the verification body accredited by the American Carbon Registry, Climate Action Reserve, or the Voluntary Carbon Standard, as appropriate, for the project carbon offsets provided.</p>					
Potential for GHG emissions.		AIR-4	<p>Central Valley will participate in the U.S. EPA's Natural Gas STAR Program. Central Valley will sign a memorandum of understanding (MOU) with the U.S. EPA prior to initial startup of the compressor station. Within 6 months after signing the MOU, Central Valley will prepare an implementation plan that includes best management practices identified by the Natural Gas STAR program for transmission and distribution facilities. The implementation plan shall incorporate Partner Reported Opportunities (PRO) that cost-effectively reduce methane emissions. Within 45 days after completion of one calendar year of participation in the program, Central Valley will submit an annual report documenting the previous year's emission-reduction activities and corresponding methane emission reductions. Copies of all documents will be submitted to the CPUC.</p>	<p>Central Valley to implement measure as defined and incorporate commitments into construction contracts. A copy of the MOU shall be provided to CPUC at least 2 weeks prior to operation of the compressor station. A copy of the implementation plan shall be provided to the CPUC within 2 weeks after its submittal to the U.S. EPA. The annual report documenting emission reduction activities shall be provided to the CPUC within 45 days after the end of the first calendar year of operation.</p>	<p>CPUC to ensure that Natural Gas STAR Program conditions have been met.</p>	Post construction.	Compressor Station	<p>Central Valley provided a copy of the MOU documenting enrollment in the EPA's Natural Gas STAR Program on March 1, 2012.</p> <p>NTP 14 includes a condition of approval that the Implementation Plan be submitted to the CPUC within 2 weeks of submittal to the U.S. EPA.</p> <p>The Plant Operations Manual has been conditioned to include a provision that a copy of the annual report is provided to the CPUC within 45 days after the end of the first calendar year of operation.</p>
Potential for CO ₂ E emissions during project operation.		AIR-5	<p>Based upon lower horsepower and hours of operation projections, the estimated CO₂E emissions from the project's stationary sources will be 15,952 metric tons per year (mtpy) CO₂E, for total project-wide GHG emissions of 16,596 mtpy. In any year, when CO₂E emissions exceed 10,000 mtpy, Central Valley will purchase offsets that will effectively cap its emissions at 10,000 mtpy by securing and retiring GHG offset credits by March 31 of a given year in a quantity equal to the previous calendar year's actual GHG emissions from the facility, minus 10,000 mtpy. Central Valley will purchase GHG offset credits from any or all of the following offset certification standards: American Carbon Registry, Climate Action Reserve, or the Voluntary Carbon Standard. Central Valley</p>	<p>Central Valley to implement measure as defined and incorporate commitments into construction contracts. Annual reports shall be provided to CPUC.</p>	<p>CPUC to review annual reports to ensure that the mitigation offsets commitment has been satisfied.</p>	Annual reports shall be provided to CPUC by March 31 of the following year.	Compressor Station	<p>Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for submitting annual reports to CPUC by March 31 of the following year.</p>

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			would report each year to the CPUC its GHG emissions and the number of GHG offsets purchased and retired to offset project emissions above 10,000 mtpy.					
	AIR-2		Central Valley shall enter into an agreement with Pacific Gas and Electric (PG&E) to participate in the ClimateSmart™ Program for purchases of Central Valley's electric energy. All contributions to the ClimateSmart™ program, funded through a surcharge to a customer's electricity charges, are invested in high-quality greenhouse gas emission reduction and capture projects that are independently verified and registered with the Climate Action Reserve. A copy of the agreement shall be provided to CPUC prior to the start of operation of the compressor station. If a future program renders this agreement redundant (e.g., if Central Valley can demonstrate that the same benefits are achieved via PG&E's participation in a future cap-and-trade program), then the agreement shall be terminated, subject to review and approval by the CPUC.	A copy of the ClimateSmart™ Program agreement shall be provided to CPUC at least 2 weeks prior to the start of operation of the compressor station.	CPUC to ensure that ClimateSmart™ Program agreement has been incorporated into construction contracts.	Prior to the start of operation of the compressor station.	Compressor Station	Central Valley provided documentation stating the ClimateSmart Program ended on December 31, 2011. The intent of this mitigation measure has been met though the GHG offset purchasing requirements outlined under MM AIR-3 as electrical usage represents >0.01% of the expected GHG emissions for operations.
Potential for GHG emissions.	AIR-3		In addition to purchasing and retiring offsets for operational emissions under APM AIR-5, Central Valley will also purchase and retire offsets to cover the GHG emissions resulting from construction of the project as follows: (1) the project carbon offsets for the first year of operation shall include a minimum of 2,514 MTCO2E, based on one-half of the total estimated construction emissions; and (2) the project carbon offsets for the second year of operation shall include the balance of 5,028 MTCO2E of construction emissions. Because Central Valley has agreed to fully offset the construction emissions of the project within the first 2 years of project operation, there is no need to amortize the construction emissions over the life of the project for the purpose of accounting for these emissions. Project carbon offsets for the construction emissions shall be provided no later than those for the operational emissions as described in APM AIR-5. Central Valley shall conduct an annual GHG emission inventory of stationary sources (compressor engines, standby generator, natural draft burner, glycol reboilers, still vent, and blowdown of natural gas) each year and report its findings to the CPUC by March 31 of the following year. Central Valley shall include in its annual GHG inventory an additional 50 MTCO2E, which accounts for an estimated 50 MTCO2E/yr from non-stationary sources When the project carbon offsets from operational emissions (APM AIR-5) and	Project carbon offsets for the construction emissions shall be provided to CPUC with a verification opinion statement(s), from the entity that certified the project carbon offsets or a verification body registered with the California Climate Action Reserve, American National Standards Institute (ANSI), or the California Air Resources Board (CARB).	CPUC ensure that project carbon credits have been purchased and retired and will review the independent verification opinion statement(s).	During operation; annual GHG emission inventory due to CPUC by March 31 of the following year.	All	Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for submitting annual GHG emission inventory to CPUC by March 31 of the following year.

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			construction emissions are retired, Central Valley shall provide to the CPUC a copy of the verification opinion statement(s) by the verification body accredited by the American Carbon Registry, Climate Action Reserve, or the Voluntary Carbon Standard, as appropriate, for the project carbon offsets provided.					
Potential hazardous substance spills during construction.	—	HAZ-2	<p>Central Valley will prepare a comprehensive Construction and Operation Safety and Emergency Response Plan that includes hazardous substance control, worker health and safety, incident response, and fire prevention and management. Each of these plan elements is briefly described below. The plan will be prepared prior to construction and will be submitted to the CPUC for review and approval.</p> <p>Release of Hazardous Substances and Emergency Response Element. This element of the plan will include measures that will be implemented if an accidental release occurs or if any subsurface hazardous materials are encountered during construction and during future operation of the facility. The provisions outlined in this plan will include telephone numbers of county and state agencies and primary, secondary, and final clean-up procedures.</p> <p>The plan will include the following measures to address hazardous materials generated from construction-related activities:</p> <ul style="list-style-type: none"> • Diesel fuel and petroleum-based lubricants will be stored only at designated staging areas. • All hazardous material spills or threatened releases—including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled—must be reported immediately if the spill has entered or threatens to enter a water of the state, has caused injury to a person, or threatens injury to public health. <p>Sudden Uncontrolled Release of Natural Gas and Emergency Response Element. This element of the plan will include measures that will be implemented if there was a failure or rupture of a pipeline or compressor station component during future operation of the facilities. The provisions outlined in this plan will include a callout procedure with telephone numbers of local fire and police responders, as well as county and state agencies. The plan will address public safety measures, emergency evacuation routes, and traffic control. Coordination and training with other parties like PG&E and the local fire and police departments will also be part of this</p>	Central Valley to prepare a Construction and Operation Safety and Emergency Response Plan as defined.	<p>Central Valley to provide CPUC copies of all plans developed in compliance with hazardous materials regulations at least 30 days prior to construction of the applicable phase(s).</p> <p>CPUC to review Construction and Operation Safety and Emergency Response Plan to ensure compliance with measure.</p>	30 days prior to construction	All	<p>Pre-Construction Component Complete.</p> <p>Central Valley provided the Operation Safety and Emergency Response Plan on March 1, 2012.</p>

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			<p>plan.</p> <p>Worker Health and Safety Element. This element of the plan will include provisions that establish worker training. This portion of the plan will also establish security measures to prevent unauthorized entry to cleanup sites and to reduce hazards outside the investigation/cleanup area. It will also address gas leaks, methods of evacuation, and general protection measures.</p> <p>Fire Prevention and Management Element. To minimize the potential fire risks during summer construction activities, this element of the plan will identify fire management measures that will be implemented during construction and operation. The plan will include the notification procedures and emergency fire precautions listed below:</p> <ul style="list-style-type: none"> • All internal combustion engines, stationary and mobile, will meet applicable regulatory standards. • Light trucks and cars with factory-installed (type) mufflers, in good condition, may be used on roads where the roadway is cleared of all vegetation. • “No Smoking” signs and fire rules will be posted at the contractor field offices and areas visible to employees during the fire season. • Equipment parking areas and small stationary engine sites will be cleared of all extraneous flammable materials. • Fire extinguishers will be installed at the compressor station and metering station. • Employee training in use of extinguishers and communication with the local fire departments will be provided to all personnel. 					
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-7	—	<p>Central Valley will conduct annual temperature logging inside injection/withdrawal well and observation well casings. A temperature tool will be run into each injection and observation well to measure temperature anomalies. In the event that anomalous temperature gradients are identified, or if elevated gas concentrations are detected in the shallow soils during monitoring conducted as part of Mitigation Measure HAZ-6, Central Valley will further investigate to determine the cause and source of the anomaly. In the event there is a casing integrity issue, practicable steps will be taken in a concerted effort to minimize the impact of the leak until repairs can be made. Leaks will be repaired as soon as possible in the case of a leak that is potentially hazardous to human health, as soon as reasonable without causing additional</p>	<p>Central Valley to implement measure as defined, and submit documentation to DOGGR for review and approval.</p>	<p>DOGGR review of documentation to ensure compliance with measure. Central Valley to provide copy of documentation and verification of submittal to DOGGR to CPUC.</p>	<p>During operation; documentation to be sent to DOGGR and CPUC no later than 4 months after leak detection.</p>	<p>Remote Well Pad Site Observation Wells</p>	<p>Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for reporting to DOGGR and CPUC in the event a leak is detected.</p>

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			hazards, and documentation will be sent to DOGGR no later than 4 months after leak detection. A copy of the documentation will be submitted to the CPUC.					
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-8	—	If routine surface or subsurface gas monitoring indicates that a well may be leaking (e.g., methane concentrations above baseline levels gas bubbles, distressed vegetation), Central Valley will report it immediately to the DOGGR and implement the appropriate remedial actions in consultation with the DOGGR. Central Valley will submit all well remediation and repair records to the DOGGR.	Central Valley to implement measure as defined, and submit documentation to DOGGR for review and approval.	DOGGR review of documentation to ensure compliance with measure. Central Valley to provide copy of documentation and verification of submittal to DOGGR to CPUC.	During operation.	Remote Well Pad Site Observation Wells	Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for reporting to DOGGR and CPUC in the event a well leak is detected.
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-9		Inspect produced-water storage tank(s) for integrity/leakage on an annual basis. Meter produced and injected formation water; periodically reconcile produced versus injected formation water quantities. Construct secondary containment berm around tank(s). Leak/pressure testing of the casing from below the base of freshwater to ground surface to verify that under injection pressures the well cannot leak saline fluid into the freshwater aquifer zones.	Central Valley to implement measure as defined, and submit documentation to DOGGR for review and approval.	DOGGR review of documentation to ensure compliance with measure. Central Valley to provide copy of documentation and verification of submittal to DOGGR to CPUC.	Containment berm constructed prior to operation. Inspections and testing during operation.	Remote Well Pad Site Salt Water Disposal Well	Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for reporting to DOGGR and CPUC in the event a tank leak is detected.
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-10		Proper gas well design. The primary aquifer protection mechanism is structurally sound, leak-free casing, and there is a competent cement bond across the base of freshwater with either the surface casing or the injection/production casing. The well design is regulated by DOGGR. Verification of adherence to well design is accomplished by inspection and by running cement bond logs after construction is completed. Periodic monitoring for indications of leakage. This includes annual temperature logging of the wells, which will detect vertical formation fluid/gas movement within the borehole area above the zone of intent. Well work to repair casing and/or annular cement seal leakage if detected.	Central Valley to implement measure as defined, and submit documentation to DOGGR for review and approval	DOGGR review of documentation to ensure compliance with measure. Central Valley to provide copy of documentation and verification of submittal to DOGGR to CPUC	Prior to construction and monitoring and repairs during operation.	Remote Well Pad Site	Pre-Construction Component Complete. Central Valley provided documentation to CPUC on March 19, 2012 and verification of submittal to DOGGR on February 13, 2012.
Potential to degrade water quality.	HYDRO-1	—	Central Valley shall develop and implement a groundwater monitoring plan that will include both pre-injection and post-injection monitoring of groundwater quality to identify any seepage of stored natural gas into the groundwater aquifers. In the event that stored natural gas is detected above the reservoir, Central Valley shall immediately consult with DOGGR and the Central Valley Regional Water Quality Control Board (RWQCB) to determine the appropriate remedial action required, including depressurization of the reservoir or other appropriate measures approved by DOGGR and the RWQCB. The monitoring and any potential remediation shall be under the supervision of DOGGR	Central Valley to prepare a groundwater monitoring plan as defined, and as necessary, coordinate with DOGGR and RWQCB. Commitments of plan shall be incorporated into construction contract.	Central Valley to monitor groundwater and provide reports to DOGGR and RWQCB. CPUC to review groundwater monitoring plan to ensure compliance with measure.	Prior to construction associated with the first gas injection of any project component.	All	Pre-Construction Component Complete. Central Valley provided the Plant Operations Manual on February 13, 2012 which includes the requirements for water sampling and reporting.

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			and RWQCB.					