

---

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



August 5, 2011

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 to Inject and Withdrawal Gas into the Wells at the Remote Well Pad Site (Application No. 09.08.008).***

Dear Mr. Kiefer:

Central Valley Natural Gas Storage has requested authorization from the California Public Utilities Commission (CPUC) to inject and withdrawal gas into the wells at the remote well pad site.

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 #5B is granted by CPUC for the proposed construction activities based on the following factors:**

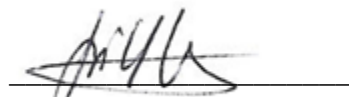
- The Mitigated Negative Declaration prepared for the Central Valley Gas Storage project defined required mitigation measures to be implemented prior to project construction. The relevant mitigation measures for injection and withdrawal of gas into the wells at the remote well pad site are summarized in *Attachment A*. Central Valley's compliance with the pre-construction component for each measure is noted in the status table.
- All construction personnel working on the Central Valley Gas Storage project have received environmental training and will be briefed on specific measures to be implemented during construction.
- All construction activities will be conducted within areas identified and included in the Final Initial Study/Mitigated Negative Declaration for the CVGS project site.

Jim Kiefer  
August 5, 2011

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

- The commitments identified in the Gas Monitoring Plan (MM HAZ-6) and MM HAZ-7, 8, 9 and 10 shall be incorporated into the Central Valley Gas Storage Operations & Procedures Manual, prior to commercial operation of the project. These commitments will need to be verified prior to issuance of NTP #14 (Commercial Operation of the Central Valley Gas Storage Project).
- The commitments identified in the Groundwater Monitoring Plan (MM HYDRO-1) shall be incorporated into the Central Valley Gas Storage Operations & Procedures Manual, prior to commercial operation of the project. These commitments will need to be verified prior to issuance of NTP #14 (Commercial Operation of the Central Valley Gas Storage Project).
- Copies of all relevant permits, compliance plans (i.e., MMCRP, SWPPP, etc.), and this Notice to Proceed shall be available on-site for the duration of construction activities. Copies of permits shall be provided to the CPUC upon request.
- All crew personnel shall be appropriately trained on environmental issues, including requirements of the MMCRP, prior to starting work. A log shall be maintained on-site with the names of all crew personnel trained and submitted to the CPUC.
- Central Valley shall comply with all applicable mitigation measures while conducting construction activities within the approved work limits associated with this Notice to Proceed.

Sincerely,



Eric Chiang  
CPUC Environmental Project Manager

cc: *D. Hochart, Dudek*  
*S. Eckardt, Dudek*  
*S. Bushnell-Bergfalk, ICF*  
*J. Kiefer, Central Valley Gas Storage, LLC*  
*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**

<b>Impact</b>	<b>MM</b>	<b>APM No.</b>	<b>Mitigation Measure/ Applicant Proposed Measure</b>	<b>Implementation Actions</b>	<b>Monitoring Requirements and Effectiveness Criteria</b>	<b>Timing</b>	<b>Project Component</b>	<b>Status</b>
Potential hazardous substance spills during construction.	—	HAZ-1	<p>The construction equipment used for the proposed project will require periodic maintenance and refueling. To reduce the potential for contamination by spills, no refueling, storage, servicing, or maintenance of equipment will be allowed within 100 feet of sensitive environmental resources. No refueling or servicing will be allowed without the placement of absorbent material or drip pans underneath the vehicle to contain spilled fuel. Any fluids drained from the machinery during servicing will be collected in leak-proof containers and taken to an appropriate disposal or recycling facility. If such activities result in spilling or accumulation of a product on the soil, the contaminated soil will be assessed and disposed of properly. Under no circumstances will contaminated soils be added to a spoils pile.</p> <p>Mobile refueling trucks likely will be used for on-site refueling of construction equipment. The refueling trucks will be independently licensed and regulated to haul and dispense fuels to ensure that the appropriate spill prevention techniques are implemented.</p> <p>All maintenance materials (oils, grease, lubricants, antifreeze, and similar materials) will be stored at off-site staging areas. If these materials are required during field operations, they will be placed in a designated area away from site activities and sensitive resources.</p> <p>During construction, vehicles and equipment not in use will be parked or stored at least 100 feet from water bodies, wetlands, known archaeological sites, and other sensitive resource areas. These areas will be identified on the construction drawings, as appropriate. All washdown activities will be conducted at least 100 feet from sensitive environmental resources.</p>	Central Valley to incorporate measure as defined and incorporate into construction contracts.	<p>CPUC to ensure that commitments have been incorporated into construction contract specifications.</p> <p>CPUC to inspect periodically to ensure measure is being implemented.</p>	Prior to and during construction.	All	<p>Pre-Construction Component Complete.</p> <p>CPUC verified on March 18, 2011 that commitments have been incorporated into construction contract specifications.</p>
Potential hazardous substance spills during construction.	—	HAZ-2	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	Central Valley to prepare a Construction and Operation Safety and Emergency Response Plan as defined.	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).	30 days prior to construction	All	<p>Pre-Construction Component Complete.</p> <p>Central Valley provided a HSES Site Manual that includes a construction safety and emergency plan.</p>

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			<p>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"> <li>• Diesel fuel and petroleum-based lubricants will be stored only at designated staging areas.</li> <li>• 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.</li> </ul> <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&amp;E and the local fire and police departments will also be part of this 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</p>		<p>CPUC to review Construction and Operation Safety and Emergency Response Plan to ensure compliance with measure.</p>			<p>CPUC verified HSES site manual and emergency plan was provided by Central Valley on March 2, 2011.</p>

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			<p>procedures and emergency fire precautions listed below:</p> <ul style="list-style-type: none"> <li>• All internal combustion engines, stationary and mobile, will meet applicable regulatory standards.</li> <li>• 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.</li> <li>• “No Smoking” signs and fire rules will be posted at the contractor field offices and areas visible to employees during the fire season.</li> <li>• Equipment parking areas and small stationary engine sites will be cleared of all extraneous flammable materials.</li> <li>• Fire extinguishers will be installed at the compressor station and metering station.</li> <li>• Employee training in use of extinguishers and communication with the local fire departments will be provided to all personnel.</li> </ul>					
Potential for impact to the public or environment due to use of hazardous materials.	HAZ-2	—	All personnel working at the compressor station and remote well pad site will be trained in general and specific hazardous chemical safety issues and response procedures.	Central Valley to implement this measure as defined and incorporate commitments into construction contracts.	Central Valley to provide verification to CPUC of worker training program and compliance with measure as defined.	Prior to construction.	Compressor Station  Remote Well Pad Site	<p>Pre-Construction Component Complete.</p> <p>Central Valley provided a HSES Site Manual that includes a construction safety and emergency plan. CPUC verified HSES site manual and emergency plan on March 2, 2011.</p>
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-6	—	<p>Central Valley will prepare and implement a Gas Monitoring Plan prior to first gas injection. The Gas Monitoring Plan will address the type and frequency of gas monitoring well tests, both surface and in shallow soils; the frequency of wellhead inspections by a qualified operator; monitoring requirements for abandoned wellheads; and reporting requirements. The Gas Monitoring Plan will be submitted to the DOGGR. DOGGR will review results of the Gas Monitoring Plan and request implementation of any additional monitoring that is required as a result of the information obtained. A copy will be submitted to the CPUC.</p> <p>The four primary elements of this gas monitoring plan are:</p> <ol style="list-style-type: none"> <li>1. Establish a baseline or background level for natural gas at the surface prior to storage operations. This will allow comparison and sound evaluation of future project-related gas monitoring results.</li> <li>2. Periodically measure for levels of detectable</li> </ol>	Central Valley to prepare a Gas Monitoring Plan as defined, and submit to DOGGR for review and approval. A copy will also be submitted to the CPUC.	DOGGR review of the Gas Monitoring Plan. Central Valley to provide copy of the plan and verification of submittal to DOGGR and CPUC.	Prior to first gas injection.	Remote Well Pad Site Observation Wells	<p>Central Valley provided a copy of the Gas Monitoring Plan to CPUC on July 11, 2011.</p> <p>Central Valley provided a copy of the Gas Monitoring Plan to DOGGR for review and comment on August 1, 2011.</p> <p>CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations &amp; Procedures Manual.</p>

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			<p>gas at predetermined surface locations. This will allow the storage operator to ascertain whether the levels of gas detected at the surface, if any, have increased noticeably above the previously established background levels. It is expected that small variations may occur, which may not individually rise to any significant level, but trends over several sample periods could provide an indication of a change that requires further investigation.</p> <p>3. Quantify and, if necessary, qualify any changes in an attempt to identify the source. First, based on sampling and testing of gas samples, determine whether the gas quality signature is similar to the native gas production in the area or to pipeline gas. Gas in the storage reservoirs will be almost exclusively pipeline gas with components that should be relatively easy to identify compared to native gas.</p> <p>4. Based on any specific changes observed, Central Valley shall respond to the data and corresponding analysis with additional testing, surveillance, or mitigation, as appropriate. If the data indicates that any detected surface gas is from the storage operation, then a plan will be developed to identify the leaking pipeline, well, or reservoir, including procedures to further test and correct the situation. The overall gas monitoring plan will be evaluated after 5 years to determine its future usefulness. The monitoring plan will consist of the following features:</p> <ul style="list-style-type: none"> <li>• Permanent monitoring/testing sites at the project remote well pad site and compressor station site</li> <li>• Leakage surveys at predetermined locations at least once each year</li> <li>• Utilization of standard, industry-approved gas measurement equipment</li> <li>• Field personnel trained on gas sampling methods and instrumentation, identifying stressed vegetation, and other indicators of potential leakage.</li> </ul>					
<p>Potential for impact to the public or environment due to release of hazardous materials into the environment.</p>	<p>HAZ-7</p>	<p>—</p>	<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</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 a copy of the Gas Monitoring Plan to CPUC on August 1, 2011, which included the measures specified in MM HAZ-7.</p> <p>Central Valley provided a copy of the Gas Monitoring Plan to DOGGR for review and comment on August 1, 2011.</p>



Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			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 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.					CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations & Procedures Manual.
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	CPUC verified on July 20, 2011 that commitments for reporting to DOGGR and CPUC have been incorporated as part of the Gas Monitoring Plan submitted in accordance with M-HAZ-8.  CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations & Procedures Manual.
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-9	—	<ul style="list-style-type: none"> <li>Inspect produced-water storage tank(s) for integrity/leakage on an annual basis.</li> <li>Meter produced and injected formation water; periodically reconcile produced versus injected formation water quantities.</li> <li>Construct secondary containment berm around tank(s).</li> <li>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.</li> </ul>	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	CPUC verified on July 20, 2011 that commitments have been incorporated as part of the Gas Monitoring Plan and project design.  CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations & Procedures Manual.
Potential for impact to the public or environment due to release of hazardous materials into the environment.	HAZ-10	—	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Well work to repair casing and/or annular</li> </ul>	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	CPUC verified on July 20, 2011 that commitments have been incorporated as part of the Gas Monitoring Plan.  CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations & Procedures Manual.



Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			cement seal leakage if detected.					
Potential to violate water quality standards or waste discharge requirements.	—	HYDRO-1	<p>The reclamation effort will involve restoration of temporarily disturbed areas (where necessary) and installation of erosion control measures to comply with County grading permits and the NPDES permit from the State Water Board. Central Valley will prepare a SWPPP that describes when, where, and how such site reclamation will occur. Site-specific erosion control measures (nonvegetative or mechanical techniques) will be determined on a site-specific basis as part of this SWPPP.</p> <p>As part of the SWPPP, erosion and sediment control measures will be implemented to reduce the amount of soil that is displaced or transported from a land area and to control the discharge of soil particles that are displaced or transported. The standard control measures and practices listed below will be implemented during and after construction to reduce accelerated soil erosion and sedimentation impacts to a less-than-significant level:</p> <ul style="list-style-type: none"> <li>• Remove only the vegetation that it is absolutely necessary to remove</li> <li>• Avoid off-road vehicle use outside the work zone</li> <li>• Avoid excessive trips along the ROW or access roads</li> <li>• Instruct all personnel on stormwater pollution prevention concepts to ensure that all are conscious of how their actions affect the potential for erosion and sedimentation</li> <li>• Perform initial cleanup</li> <li>• Compact subsurface backfill material</li> <li>• Apply an appropriate seed mix, where determined necessary, in nonagricultural areas and through coordination with the landowner.</li> </ul> <p>Construction inspectors will be on site during all construction activities and will reinforce the importance of confining all vehicular traffic to the existing ROW and access roads.</p>	Central Valley to implement measure as defined and incorporate commitments into construction contracts.	Central Valley to receive approval of plans from Colusa County Public Works Department. Central Valley to provide verification to CPUC of measure, including submittal of construction contract at least 2 weeks prior to construction of the applicable phase(s).	Prior to issuance of grading permit	All	<p>Pre-Construction Component Complete.</p> <p>Central Valley provided grading plan issued by Colusa County and SWPPP submitted to RWQCB. CPUC verified pre-construction component has been met on March 2, 2011.</p>
Potential to degrade water quality.	HYDRO-1	—	<p>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</p>	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	<p>Central Valley provided a copy of the Groundwater Monitoring Plan to CPUC on July 19, 2011.</p> <p>Central Valley provided a copy of the Groundwater Monitoring Plan to DOGGR and RWQCB for review and comment on August 1, 2011.</p>

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing	Project Component	Status
			and the RWQCB. The monitoring and any potential remediation shall be under the supervision of DOGGR and RWQCB.					CPUC will verify that prior to commercial operation of the project (NTP #14) that the commitments as defined in this measure have been incorporated into the CVGS Operations & Procedures Manual.