A. Public Agencies and Officials

Document No. A1

APR 0 9 2009

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. LL40
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

April 8, 2009

Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, CA 92024

State Clearinghouse (SCH) Number: 2007112089
Sacramento Natural Gas Storage Project

Staff for the Department of Water Resources has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2). **A1-1**

A Board permit is required prior to starting the work within the Board's jurisdiction for the following: **A1-2**

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee(CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

Sincerely,

James Herota
Staff Environmental Scientist
Floodway Protection Section
Division of Flood Management

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

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Document No. A2

SACRAMENTO-YOLO
MOSQUITO
& VECTOR
CONTROL
DISTRICT

MAILING ADDRESS
SACRAMENTO COUNTY
8631 BOND ROAD
ELK GROVE, CA 95624

YOLO COUNTY
1234 FORTNA AVENUE
WOODLAND, CA 95695

1.800.429.1022
FIGHTtheBITE.net

May 6, 2009

Kristin Ford
Assistant Planner
City of Sacramento
Environmental Planning Services
300 Richards Blvd
Sacramento, Ca 95811

Re: Draft EIR Sacramento Natural Gas Storage Project (P07-111)

In review of the draft EIR for the Sacramento Natural Gas Storage Project; the Sacramento-Yolo Mosquito and Vector Control District does not have any comments at this time.

Please continue to forward plans to the District for review regarding storm water run off structures, catch basins or other possible mosquito habitats. We ask that you review and apply the District's BMP (Best Management Practices) for each project which is posted for your convenience at:
http://www.fightthebite.net/download/SYMVCD_BMP_Manual.pdf

A2-1

Sincerely,

Marty Scholl
Ecological Management Supervisor
Sac-Yolo Mosquito and Vector Control District
916-405-2085
mscholl@fightthebite.net

Cc: Gary Goodman, Assistant Manager
Sac-Yolo Mosquito and Vector Control District

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Document No. A3

SACRAMENTO AREA
SEWER DISTRICT
SERVING YOU 24/7

May 14, 2009
E225.000

Kristin Ford
City of Sacramento
Environmental and Planning Services
300 Richards Blvd.
Sacramento, CA 95811

Subject: **Draft Environmental Impact Report (DEIR) for the Sacramento Natural Gas Storage Project**
Control No.: **P07-111**

Dear Ms. Ford:

Sacramento Area Sewer District (District) has reviewed the Draft Environmental Impact Report (DEIR) for the subject project. The Sacramento Regional County Sanitation District (SRCSD) may send their comments in a separate letter.

It is noted that the proposed project consists of the construction and operation of an underground natural gas storage facility. Proposed project components would be located within the City of Sacramento, the city of West Sacramento, the County of Sacramento, and Yolo County.

A3-1

Part of subject project is within the boundaries of the District, SRCSD, and the Urban Service Boundaries (USB) as defined by the Sacramento County General Plan. The ultimate plan for sewer conveyance and treatment of the subject property, if required, shall be by the District as specified in the SASD Master Plan.

A3-2

This project will involve placing natural gas lines in roadways that have existing District sewer lines. Separation of sewer line from other parallel utilities shall be a minimum of 7 feet (measured horizontally from the center of pipe to the center of pipe). Any deviation from the above separation due to depth and roadway width must be approved by the District on a case by case basis.

A3-3

The subject project will not significantly impact District facilities. Additional comments and conditions of approval are not needed at this time.

A3-4

10545 Armstrong Avenue
Mather, California 95655
Tel 916.876.6000
Fax 916.876.6160
www.sacsewer.com

Formerly County Sanitation District 1

We expect that if the project is subject to currently established policies, ordinances, fees, and to conditions of approval, then mitigation measures within the EIR will adequately address the sewage aspects of the project. We anticipate a less than significant impact to the sewage facilities due to mitigation.

If you have any questions regarding these comments, please call Amandeep Singh at (916) 876-6296 or myself at 916) 876-6094.

A3-4 (Cont.)

Sincerely,

Salam A. Khan, P.E.
Department of Water Quality
Development Services

SK/CJ: ms

cc: File

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

May 21, 2009

Mr. Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, California 92024

SUBJECT: **Draft Environmental Impact Report for the Sacramento Natural Gas Storage Project**
SMAQMD # SAC200500733E

Dear Mr. Rosauer

Thank you for providing the Administrative DEIR listed above to the Sacramento Metropolitan Air Quality Management District (District). Staff comments follow.

Construction-related impacts

According to the document, the project's construction-related emissions were modeled using an URBEMIS computer run. This analysis showed the construction emissions exceed the District's threshold for significance (85 lbs NOX/day) and that those emissions would be mitigated to below the District's threshold by application of the District's on-site construction mitigation and the payment of a fee to the District's off-site construction mitigation program. Compliance with District rules and implementation of the described mitigation measures described in the document should reduce the project's short-term construction-related emissions to a level below the District's threshold of 85 ponds of NOx per day.

A4-1

Table D.2-7 describes the Applicant Proposed Measures for Air Quality. Measure 4(d) includes an outdated fee per ton rate and fee estimate for off-site construction mitigation. Please update these figures to reflect the correct fee rate and calculation described in mitigation measure for impact A-2 as described in the bottom paragraph of page D.2-26. Also please update any discussions of the off-site construction mitigation fee to reflect the fact these fee's are estimates. The final fee calculation should occur at the time ground disturbance using the most current price per ton[1] and fee calculation methodology recommended by the District.

Greenhouse Gas and Climate Change impacts

The District recommends that the project revise the qualitative threshold for GHG described on page D.2-19. This qualitative threshold reads:

A4-2

> "To assess the impact of the Proposed Project with respect to global climate change, the project will be evaluated by the following criterion: Project would impede or conflict with the emissions reduction targets and strategies prescribed in or developed to implement AB 32 (see Impact A-8)."

[1] The District's recommended cost per ton is based on the most current fee per ton set by the California Air Resources Board for the Carl Moyer program

It is the Districts position that any findings of significance for the emissions of GHGs should be based on a projects potential global warming impacts, not on its lack of interference with a particular policy. Analysis of climate change impacts is not simply a technical exercise. If the analysis demonstrates that a project may have a significant impact, there are many practical climate change mitigation measures available to reduce or eliminate the project impacts. Moreover, avoiding feasible mitigation today will require other projects to implement more difficult and costly mitigation in the future, as GHG levels increase in the atmosphere.

The DEIR notes in section D.2.2.6 that the AB-32 Scoping plan includes measures for the natural gas sector, but does not discuss these measures in detail because "no regulations for specific reductions have been established that would apply to the Proposed Project." While these measures are not required by regulation, they could reduce the impacts associated with the project and should therefore be considered for implementation. The District recommends that the final EIR include an analysis of typical GHG reduction measures and the mitigation measures for the Natural Gas sector from the AB-32 scoping plan and make specific findings as to why individual measures are or are not feasible for this project. Any measures that could be feasibly implemented should be included as mitigation for this impact.

A4-2 (Cont.)

SMAQMD Rules and regulations

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. Please see the attached document describing SMAQMD Rules which may apply to this project.

A4-3

Please send the environmental document, including the air quality analysis to me. If you have questions, please contact me at 916.874.2694or jhurley@airquality.org.

Sincerely,

Joseph James Hurley
Assistant Air Quality Planner Analyst

cc: Larry Robinson SMAQMD
Tim Taylor SMAQMD

Enc: SMAQMD Rules and Regulations
SMAQMD Recommended Construction Mitigation

SMAQMD Recommended Mitigation for Reducing Emissions from Heavy-Duty Construction Vehicles

Only For Projects With Construction Emissions Above the CEQA Threshold of Significance

Revised December 9, 2005

Category 1: Reducing NOx emissions from off-road diesel powered equipment

The project shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction[1] compared to the most recent CARB fleet average at time of construction; and

The project representative shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

and:

Category 2: Controlling visible emissions from off-road diesel powered equipment

The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or state rules or regulations.

[1]Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

A4-4

777 12th Street, 3rd Floor ▪ Sacramento, CA 95814-1908
916/874-4800 ▪ 916/874-4899 fax
www.airquality.org

SMAQMD Rules & Regulations Statement (revised 1/07)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 417: Wood Burning Appliances. Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

A4-4 (Cont.)

777 12th Street, 3rd Floor ▪ Sacramento, CA 95814-1908
916/874-4800 ▪ 916/874-4899 fax
www.airquality.org

Document No. A5

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

May 26, 2009

Regulatory Division SPK-2009-00476

Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, California 92024

Care of: Michael Rosauer

Dear Mr.Rosauer:

We are responding to your April 4, 2009 request for comments on the Sacramento Natural Gas Storage project. This project is located at Latitude 38° 30' 35.9994", Longitude-121° 24' 19.8714", Section 26, Township 8 North, range 5 East, near Sacramento, in Sacramento County, California. Your identification number is SPK-2009-00476.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work. A5-1

To ascertain the extent of waters on the project site, the applicant should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetland Delineations", under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is also available on our website at the same location. A5-2

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation. A5-3

Please refer to identification number SPK-2009-00476 in any correspondence concerning this project. If you have any questions, please contact Kathleen Dadey at, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *Kathleen.A.Dadey@usace.army.mil*, or telephone 916-557-7253. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

A5-4

Sincerely,

Kathleen A. Dadey, Ph.D.
Chief, California Delta Branch

Document No. A6

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 - SACRAMENTO AREA OFFICE - MS 19
2800 GATEWAY OAKS DRIVE
SACRAMENTO, CA 95833
PHONE (916) 274-0635
FAX (916) 263-1796
TTY 711

June 18, 2009

09SAC0023
03-SAC-5/99
Sacramento Natural Gas Storage Project
CPCN Application No. 07-04-013
Draft EIR
SCH#2007112089

Mr. Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, CA 92024

Dear Mr. Rosauer:

Thank you for the opportunity to review and comment on the Sacramento Natural Gas Storage Project DEIR. This natural gas storage project proposes several alternatives and includes features such as underground natural gas storage and pipelines that have the potential to cross State freeway corridors, such as Interstate 5 and State Route (SR) 99, and the Union Pacific railroad corridor within the Sacramento Region. Our comments are as follows: A6-1

- Any proposed pipeline work to be performed within Caltrans right-of-way will require an Encroachment Permit. For permit assistance, please contact the Encroachment Permits Office at (530) 741-4403. A6-2

- We note that in Table ES-1 of the Executive Summary on Page ES-57, the listed "T-1" impact and associated "Road and Lane Closure" mitigation measure indicates that, prior to the start of construction, the Sacramento Natural Gas Storage (SNGS) , LLC will submit a Traffic Control Plan to the City of Sacramento and the Sacramento Fire Department. Caltrans has its own guidelines for a Traffic Management Plan that our agency would also appreciate being completed by the project proponents.

  The Traffic Management Plan (TMP) should be prepared and submitted for Caltrans review to minimize traffic impacts to Interstate 5 and SR 99 during construction of the pipeline. The traffic control plan should discuss the expected dates and duration of construction, as well as traffic mitigation measures. We recommend that to the extent possible, the applicant should limit truck trips during morning and evening peak traffic periods (6-9 AM and 3-6 PM) to avoid exacerbating congestion. For TMP assistance, please contact John Holzhauser at (916) 274-0505. A6-3

- The location of any new natural gas pipelines in or near State freeway and highway facilities should be shared with Caltrans. "As-Built" Plans should be prepared for updating Caltrans records. David Thibeault of the Office of Right of Way Engineering should be contacted at (530) 741-5305 regarding these procedures. **A6-4**

- Proper permitting and notification of the Union Pacific Railway would be required by their private corporation for any proposed natural gas pipeline work that may cross their rail lines. **A6-5**

- Project development should mitigate construction activities and drainage such that they will not contribute contaminants to storm waters handled by State facilities, for example oils, grease, sand, sediment, or debris. All runoff that enters the State right-of -way must meet Regional Water Quality Control Board (RWQCB) standards for clean water. **A6-6**

- Any increases of discharge into the State drainage system (i.e., Interstate 5) must be mitigated. Existing drainage patterns must be perpetuated or improved within the State right-of-way. Pre and post-project discharge information should be supplied for Caltrans review. **A6-7**

- The incorporation of environmental Best Management Practices, ie. retention ponds, infiltration trenches, or other drainage improvements should be used to mitigate drainage impacts by the proposed development. **A6-8**

If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,

Alyssa Begley

ALYSSA BEGLEY, Chief
Office of Transportation Planning - South

c: Mr. Scott Morgan, State Clearinghouse
Mr. Gerald Wilmoth, Union Pacific - Roseville

State of California

Department of Transportation

Transportation Management Plan Guidelines

A6-9

Prepared By:

Division of Traffic Operations

Office of Systems Management Operations

Table of Contents

A6-9
(Cont.)

I. INTRODUCTION

A. BACKGROUND

With the construction of California's state highway system virtually complete, the California Department of Transportation (Department) major emphasis on transportation projects has largely shifted from new construction to reconstruction, operation, and maintenance of existing facilities. As traffic demand steadily increases, Department work activities can create significant additional traffic delay and safety concerns on already congested highways. Planning work activities and balancing traffic demand with highway capacity becomes more critical.

In order to prevent unreasonable traffic delays resulting from planned work, Transportation Management Plans (TMPs) must be carefully developed and implemented in order to maintain acceptable levels of service and safety during all work activities on the state highway system.

B. WHAT ARE TRANSPORTATION MANAGEMENT PLANS?

A TMP is a method for minimizing activity-related traffic delay and accidents by the effective application of traditional traffic handling practices and an innovative combination of public and motorist information, demand management, incident management, system management, construction strategies, alternate routes and other strategies.

All TMPs share the common goal of congestion relief during the project period by managing traffic flow and balancing traffic demand with highway capacity through the project area, or by using the entire corridor. Certain low-impact Maintenance and Encroachment Permit activities do not require the development of individual TMPs. "Blanket" TMPs are developed for those activities. A blanket TMP is a generic list of actions that would be taken to keep delay below the delay threshold when performing activities on highways. Each district Maintenance and Encroachment Permit office should have a list of activities to which blanket TMPs apply.

All Capital projects require individual TMPs. Blanket TMPs are suitable for minor projects. Major TMPs are required for high-impact projects. Generally, major TMPs are distinguished by being:

- Multi-jurisdictional in scope, encompassing the Department of California Highway Patrol (CHP), city, county and regional governments, state DOTs, employers, merchants, developers, transit operators, ridesharing agencies, neighborhood and special interest groups, emergency services, and Transportation Management Associations;
- Multi-faceted, comprised of an innovative mix of traffic operations, facility enhancement, demand-management and public relations strategies, as well as more traditional work zone actions, construction methods and contract incentives, customized to meet the unique needs of the impacted corridor;
- In place over a longer period of time, sometimes implemented up to a year or more prior to the start of actual construction, with specific elements often implemented incrementally to coincide with construction phasing.

C. POLICY

A6-9 (Cont.)

Department Deputy Directive 60 (DD-60) titled Transportation Management Plans (see APPENDIX) requires TMPs and contingency plans for all state highway activities.

Policy Statement:

The Department minimizes motorist delays when implementing projects or performing other activities on the state highway system. This is accomplished without compromising public or worker safety, or the quality of the work being performed.

TMPs, including contingency plans, are required for all construction, maintenance, encroachment permit, planned emergency restoration, locally or specially-funded, or other activities on the state highway system. Where several consecutive or linking projects or activities within a region or corridor create a cumulative need for a TMP, the Department coordinates individual TMPs or develops a single interregional TMP.

TMPs are considered early, during the project initiation or planning stage.

Major lane closures require District Lane Closure Review Committee (DLCRC) approval.

Definitions:

Major lane closures are those that are expected to result in significant traffic impacts despite the implementation of TMPs.

Significant traffic impact is 30 minutes above normal recurring traffic delay on the existing facility or the delay threshold set by the District Traffic Manager (DTM), whichever is less.

Contingency Plans address specific actions that will be taken to restore or minimize effects on traffic when congestion or delays exceed original estimates due to unforeseen events such as work-zone accidents, higher than predicted traffic demand, or delayed lane closures.

II. TMP DEVELOPMENT AND IMPLEMENTATION

A. OVERVIEW

Responsibilities:

The DTM:

- Acts as the single focal point for all traffic impact decisions resulting from planned activities on the state highway system.
- Determines the extent of a TMP.
- Facilitates review and approval of TMP measures and planned lane closure requests.
- Directs the termination or modification of active planned lane closure operations when traffic impact becomes significant, without compromising traveler or worker safety.

A6-9 (Cont.)

The TMP Manager:

- Acts as the single focal point for development and implementation of TMPs.

The Construction Traffic Manager (CTM):

- Serves as a liaison between Construction, the DTM and the TMP Manager.
- Reviews the TMP and traffic contingency plan for constructability issues.
- Act as a resource for the Resident Engineer, DTM and TMP Manager during TMP implementation and reviews the contractor's contingency plan.

The extent of a TMP is determined by the DTM during the preliminary studies of a capital project. For all TMPs, an itemized estimate of the proposed strategies and their respective costs are included in the Project Study Report (PSR) or Project Study Scoping Report (PSSR) for proper funding consideration. The workload required to develop and implement TMPs is estimated in advance and captured in the district work plan.

For major TMPs, a TMP team may need to be formed and led by the TMP Manager. The itemized strategies and costs are further refined in the project report stage as determined by the TMP team and appropriate functional units using the most current geometric information available. Those elements of the TMP not included as part of the main construction contract should be itemized under State Furnished Material and Expenses using the appropriate Basic Engineers Estimate System (BEES) codes in the plans, specifications and estimates. During construction, TMP activities are to be monitored and evaluated by the TMP team and those elements found not to be cost effective should be modified as deemed appropriate or eliminated. The TMP process is explained in detail in the following sections.

A6-9 (Cont.)

B. FUNDING AND PROGRAMMING

When identifying funding for various TMP elements, it is important to distinguish between capital outlay and capital outlay support.

Work done by district staff for the planning and designing of TMP activities for capital projects are a normal part of the project development process and should be captured as capital outlay support. The TMP Manager and each functional manager should work closely with the project manager to ensure that TMP activities are included in all project work plans. TMP support activities to consider include ridesharing programs, Freeway Service Patrol (FSP) contracts, public awareness campaigns, parallel route improvements and the Request for Proposal (RFP) process up to award of the contract. Note that some of these activities may also have a capital component in addition to the support component discussed here. Workload hours for TMP activities must be included in the Capital Outlay Support (COS) project's work plan in order to be resourced (funded) by COS. These activities should then be charged to each project's expenditure authorization (EA), using the appropriate Work Breakdown Structure (WBS) code for that stage of the project. TMP-related work should be charged only to the WBS codes reserved for those activities. These codes can be found on the Department's Division of Project Management's Intranet web page.

Work done by district staff for implementing TMP elements during construction of capital projects are also a normal part of the project development process. Again, workload (hours) for implementing TMP activities must be included in the COS project's work plan in order to be resourced (funded) by COS. These activities should then be charged to the appropriate project's phase three EA, and WBS code 270 (Perform Construction Engineering and Contract Administration).

Some funds necessary to implement TMP elements not done by the Department staff, including consultant contracts, can be sourced from capital outlay funds allocated by the California Transportation Commission (CTC) as itemized in the plans, specifications and estimates. Some TMP elements, such as parallel route improvements and highway advisory radios, could be a phase of the construction contract or separate construction contracts while others such as public awareness campaigns and transit subsidies must be separate contracts or cooperative agreements.

The TMP elements that need to be in place prior to start of construction are identified and funded as stage construction or first order of work under a single package presented to the CTC. If approved, the Division of Budgets may assign specific amounts for each TMP activity. All TMP activities may not necessarily be included under the main contract. Service contracts such as those for freeway service patrols, public service or consultant contracts, information campaigns, or establishing telephone hotlines must be arranged separately with consultants and other providers. For most projects, it takes four to six months to get a service contract in place. This means that all consultant contracts have been advertised, the consultant selected, and the contract ready for signature and award immediately following CTC allocation of funds. Other activities such as parallel route improvements are usually included in the main construction contract and as a first order of work under a cooperative agreement.

In some cases, the CTC can be petitioned to fund a portion of the TMP as an initial phase of the main project. This is usually for a high priority project where plans, specifications, and estimates for the main project are not yet finalized, but early funds are needed to initiate TMP activities such as making transit arrangements with local governments. The petition to fund an initial phase comes from the district, explaining why a portion of the project must proceed before funding for the main project is allocated. These early funds reduce the programmed funds for the main project accordingly.

The Federal Highway Administration (FHWA) supports the TMP concept and views major reconstruction projects as an excellent opportunity to initiate continuing traffic management strategies that provide improved traffic operations long beyond the completion of work. Examples include: installation of permanent Changeable Message Sign (CMS), full structural section shoulders, continuing auxiliary lanes, and wider shoulders for incident management during construction if cost-effective in the long term. All cost-effective transportation management activities that address the problem of delay or safety are eligible for 100 percent Federal Aid funding.

TMPs and contingency plans for Encroachment Permit projects are developed by the permittee or by Department staff. Staff time for development, review and implementation of TMPs for Encroachment Permits is charged to the permit. Maintenance normally develops TMPs for its projects; Maintenance and staff from other functional areas that expend time on Maintenance TMP charge to the designated Maintenance EA.

C. TMP IN PROJECT INITIATION DOCUMENT

The TMP is part of the normal project development process and must be considered in the Project Initiation Document (PID) or planning stage (project K phase). Since projects are generally programmed, budgeted, and given an Expenditure Authorization (EA) upon PID approval, it is important to allow for the proper cost, scope and scheduling of the TMP activities at this early stage of development. TMPs that are retrofitted to projects already programmed must be handled on a case by case basis and may require a contract change order.

A6-9
(Cont.)

Prior to PID approval, the initiating unit sends conceptual geometrics to the district Division of Operations for evaluation. The DTM estimates the extent of the TMP required and determines whether potential traffic delays are anticipated that cannot be mitigated by traditional traffic handling practices or well-planned construction staging. The TMP Manager must sign-off on the TMP DATA SHEET in the PID. A TMP cost estimate should be developed for each alternative being considered. An estimate should not be based only on the project cost. The cost of a TMP could range from a small percentage of project cost to 20 percent or more. Further guidance can be obtained from the following publications "Wilbur Smith & Associates TMP Effectiveness Study" and Frank Wilson & Associates "A Traffic Management Plan Study for State Route 91" located in Headquarters Traffic Operations, Office of System Management Operations.

TMP Elements

A list of potential TMP strategies with their respective elements is categorized in TABLE 1. As many different elements as are feasible should be considered for the proposed project's preliminary TMP.

When developing a preliminary TMP at this early stage, use the most current layout of the roadway (geometrics) information available and consider:

Contingency Plans
Lane closure policies and procedures
TMC coordination
Multi-jurisdictional communication and buy-in
CHP and local law enforcement involvement
Emergency closures
Clearance of alternate routes for STAA and oversized
Special training or workforce development
Duration of construction (months)
Length of project (miles)
Number of major construction phases
Urbanization (urban, suburban, or rural)
Traffic volumes
Expected vehicle delay (from data sheet)
Public/media exposure
Political or environmental sensitivity
Business impacts and affected activity
Percent trucks
Potential increase in accidents
Permit issues
Conflicting construction projects
Percent reduction in vehicle capacity
Special factors (if any)
Impact on Transit/Railroad services
Viability of alternative routes

Wilbur Smith Associate's TMP Effectiveness Study and Frank Wilson & Associate's A Traffic Management Plan Study for State Route 91 During Construction of HOV Lanes (both available from Headquarters Division of Traffic Operations, Office of System Management Operations) are excellent sources for guidance on selecting the most cost-effective TMP elements. The district Public Information office is also an experienced source for estimating the effectiveness of public information campaign options, and can help the TMP Manager estimate their cost and effectiveness in reducing traffic demand through the project area.

Public information campaigns serve two main purposes in TMPs. They inform the public about the overall purpose of the project to generate and maintain public support; and they encourage changes in travel behavior during the project to minimize congestion. Because they give travelers the information they need to make their own travel choices, public information campaigns can be the single most effective of all TMP elements.

The FSP is a congestion relief program of roving tow trucks operating in most metropolitan and some rural areas. The FSP program is operated by Regional Transportation Planning Agencies (RTPAs) with funding from the Department. The Department also reimburses the CHP for training and supervisory services provided for the FSP. The RTPAs contract with tow companies

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for commute time service and some weekend and mid-day service to assist motorists with simple repairs (i.e. flat tire, one gallon of gas) or tow the automobile from the highway.

FSP is available for incident management during construction. However, construction-related FSP service needs to be funded as part of the TMP. A cooperative agreement with the RTPA is required, outlining the services provided and the fund transfer. An interagency agreement with the CHP is required for any support services (field supervision and dispatch operator services). These agreements should be initiated with the RTPA and the CHP as soon as it is determined that FSP should be in the project TMP.

The Department's HQ Traffic Operations is currently working on Master Agreements with the RTPAs for future FSP services. This process will simplify the process for both the Department and the RTPAs by eliminating the need for a cooperative agreement for each project. Only a task order form will be needed for each project. A similar agreement is being created with the CHP. Please contact HQ Traffic Operations, Freeways Operations Branch for more information.

TABLE 1

TMP STRATEGIES AND THEIR ELEMENTS

A. Public Information	Off peak/Night/Weekend Work
Brochures and Mailers	Planned Lane/Ramp Closures
Media Releases (including	Project Phasing
Minority Media Sources)	Temporary Traffic Screens
Paid Advertising	Total Facility Closure
Public Information Center	Truck Traffic/Permit Restrictions
Public Meetings/Speaker's Bureau	Variable Lanes
Telephone Hotline	Extended Weekend Closures
Visual Information (videos, slide shows, etc.)	Reduced Speed Zones
Local cable TV and News	Coordination with Adjacent Construction
Traveler Information Systems (Internet)	Traffic Control Improvements
Internet	Total Facility Closure
B. Motorist Information Strategies	**E. Demand Management**
Electronic Message Signs	HOV Lanes/Ramps
Changeable Message Signs	Park-and-Ride Lots
Extinguishable Signs	Parking Management/Pricing
Ground Mounted Signs	Rideshare Incentives
Commercial Traffic Radio	Rideshare Marketing
Highway Advisory Radio (fixed and mobile)	Transit Incentives

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Planned Lane Closure Web Site	Transit Service Improvements
The Department's Highway Information Network (CHIN)	Train or Light-Rail Incentives
Radar Speed Message Sign	Variable Work Hours
	Telecommute
C. Incident Management	Shuttle Service Incentives
Call Boxes	
Construction or Maintenance Zone Enhanced	**F. Alternate Route Strategies**
Enforcement Program – COZEEP or MAZEEP	Ramp Closures
Freeway Service Patrol	Street Improvements
Traffic Surveillance Stations (loop detectors and CCTV) Closures	Reversible Lanes
911 Cellular Calls	Temporary Lanes or Shoulder Use
Transportation Management Centers	
Traffic Control Officers	**G. Other Strategies**
CHP Officer in TMC during construction	Application of new technology
Onsite Traffic Advisor	Innovative products
CHP Helicopter	Improved specifications
Traffic Management Team	Staff Training/Development
D. Construction Strategies	
Incentive/Disincentive Clauses	
Ramp Metering	
Lane Rental	

If the DTM determines that a major TMP is required, the TMP Manager forms a TMP development team. The team's membership will vary according to the TMP elements proposed and the project's impacts. At a minimum, it should include representatives from Construction, Public Affairs, Project Development, Traffic Operations (including Transportation Permits), the CHP and local agencies. Others to be considered as the plan gets refined are Rideshare, Transportation Planning, Public Transportation, Maintenance, Structures, CHP, local law enforcement, local transit agencies, emergency services, and FHWA. Local Maintenance field staff familiar with conditions in the project area should be team members or should be consulted as needed as the TMP develops.

D. TMP IN PROJECT REPORT

As more information becomes available during the project report phase the preliminary scope and cost of the overall TMP and the individual elements should continue to be refined. The TMP team will coordinate the TMP strategies with the project engineer and appropriate units, with

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each team member handling their area of expertise. For major projects, subcommittees or task forces may be formed to handle the planning, implementation, monitoring, and evaluation details of some elements. The TMP Manager will keep the Project Manager and district Construction Coordinator updated and must sign-off on the TMP data sheet of the project report.

It is appropriate at this point to develop a timeline schedule for major TMPs keeping in mind that many elements of the TMP have to begin prior to the start of construction. Many TMP elements listed in Table 1 need to be developed separately but concurrently with the project plans. They may be bid and constructed or initiated separately from the project or be included in the project plans and be installed or implemented as the first order of work.

Some tasks may take a long time depending on the complexity of the major project and the type of transportation management necessary. For example, if building new park-and-ride lots are necessary for the Ridesharing element, the planning phase would have to be extended for several months and a design phase added.

An additional activity involves analyzing the existing traffic volume in the corridor, both on the freeway and surface streets. This will provide a basis for establishing the goal of the TMP, i.e., the number of vehicles that should be removed from the freeway, and in determining the capability of the surrounding surface streets to handle the additional traffic demand. It can also provide a database for evaluating the overall effectiveness of the TMP.

E. TMP IN PS&E

Those TMP elements that are not part of the main contract, but are identified as capital outlay costs tied to the main project, should be itemized as State Furnished Materials and Expenses using the appropriate BEES item cost (see TABLE 2). The Project Engineer should consult with the TMP Manager to ensure that the appropriate "Maintaining Traffic" Standard Special Provisions (SSP) are included in the PS&E. The SSPs should always require the contractor to submit a contingency plan.

The TMP and PS&E should address oversize and overweight vehicles traveling under a transportation permit. Additional construction area signs should be provided that restrict travel to overwidth vehicles whenever the lateral clearance drops to 15 feet or less.

The DTM must concur with the PS&E and with Encroachment Permit and Maintenance TMPs.

TABLE 2

TMP BEES ITEM CODES
066003 State Furnished Materials
066004 Miscellaneous State Furnished Materials
066005 Concurrent Work
066006 Miscellaneous Concurrent Work
066008 Incentive Payment
066009 Utility Expense

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066010 Work by Others
066060 Additional Traffic Control
066061 CHP Enhanced Enforcement
066062 COZEEP Contract
066063 Traffic management plan – public Information
066064 Specter Radar Unit
066065 Freeway Service Patrol
066066 Public Transit Support
066069 Rideshare Promotion
066070 Maintain Traffic
066072 Maintain Detour
066074 Traffic Control
066076 Temporary Traffic Control
066077 Install Traffic Control Devices
066578 Portable Changeable Message Signs
066825 Temporary Striping
066872 Service Contract
128602 Traffic Control System (One Way)
128650 Portable Changeable Message Signs
129150 Temporary Traffic Screen
861793 Telephone Service (Location 1)
860811 Detector Loop
860925 Traffic Monitoring Station (Count)
860926 Traffic Monitoring Station (Speed)
860927 Traffic Monitoring Station (Incident)
860930 Traffic Monitoring Station
861088 Modify Ramp Metering System
861985 Travelers Information system
869070 Power and Telephone Service
991046 Public Address System
991047 Telephone Facility
994920 Bicycle Parking Rack

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(Cont.)

995000 Bus Shelter
995002 Bus Passenger Shelter (Type S-1)
995004 Bus Passenger Shelter (Type SM-1)
995005 Bus Passenger Shelter (Type LM-1

F. TMP DURING CONSTRUCTION AND MAINTENANCE OPERATIONS

During construction, those TMP elements that are part of the main contract or Encroachment Permit are implemented under the general direction of district Construction or Encroachment Permits. Those separate contracts/agreements such as for rideshare and transit activities and public awareness campaigns will be under the direction of their respective contract managers.

Special effort should be given to assure that Changeable Message Sign (CMS), Highway Advisory Radio ()HAR) and other media tools provide accurate and timely information to motorists regarding lane closure times and

TMP elements must be carefully monitored for cost effectiveness. The TMP team should determine whether the implemented measures are reaching the predetermined goals for cost effectiveness. If an element's predetermined goal is not immediately reached during implementation, but there is a general trend toward meeting that goal, the element can remain in effect and the FHWA will continue to participate. Elements that show no sign of approaching their predetermined goals as determined by the TMP Manager must be modified as deemed appropriate or dropped.

Contractor compliance with lane closure pickup deadlines can be enforced in two ways. A "maintaining traffic" SSP allows a penalty to be assessed to the contractor for value of traffic delay when the contractor exceeds the lane closure window. The minimum penalty is $1,000 per 10 minutes, but it can greatly exceed the minimum, depending on traffic volumes and the highway facility. The DTM calculates the "delay penalty" during PS&E. The second method is for the state representative to suspend the contract work.

A contractor or the Department forces (such as Maintenance) can be ordered to pick up a lane closure early if traffic impacts become significant either due to a project incident or activities outside the project area. Early pickup should only be ordered when traveler and worker safety will not be compromised. The "maintaining traffic" SSPs for capital projects provide for compensating contractors for early pickup. Encroachment Permit provisions require the permittee to pick up a closure early without compensation.

DTM's are to ensure that lane closures will not be terminated early, or may be extended beyond the lane closure window when the activity needs to be completed for the safety of the public or workers. These activities may include structure inspections and repairs, guardrail repairs, culvert replacement.

In order to avoid significant traffic impacts, it is essential to monitor and respond immediately to delay, pick up closures on time, and have solid traffic and contractor contingency plans.

A Department staff member who can make informed decisions about implementing contingency plans and modifying, terminating or extending approved lane closures should be available to respond to significant delays and other unexpected events whenever lane closures are in place.

A6-9 (Cont.)

The designated employee(s) may be Traffic Operations, Construction, or TMC staff, depending on the district.

At the end of the project a post-TMP evaluation report must be completed by the TMP Manager for all major TMPs and for TMPs where the actual delay exceeded the threshold set by the DTM. Post-TMP meetings with the CHP and other partners can be held to identify what went well and what could have been done differently. Samples of past TMP reports can be obtained from headquarters' Traffic Operations, Office of System Management Operations and from the DTM.

Contingency Plan

Both traffic and contractor contingency plans are required for all planned work. Both blanket and individual TMPs must include contingency plans. The traffic contingency plan, prepared by the Department or a consultant, addresses specific actions that will be taken to restore or minimize affects on traffic when the congestion or delay exceeds original estimates due to unforeseen events such as work-zone accidents, higher than predicted traffic demand, or delayed lane closures. The contractor contingency plan addresses activities under the contractor's control in the work zone. After the contractor's contingency plan is submitted and approved, it becomes part of the TMP contingency plan.

The TMP contingency plan should include, but is not limited to the following:

- Information that clearly defines trigger points which require lane closure termination (i.e., inclement weather, length of traffic queue exceeds threshold;
- Decision tree with clearly defined lines of communication and authority;
- Specific duties of all participants during lane closure operations, such as, coordination with CHP or local police, etc.;
- Names, phone numbers and pager numbers for the DTM or their designee, the Resident Engineer (RE), the Maintenance Superintendent, the Permit Inspector, the on-site traffic advisor, the CHP Division or Area Commander, appropriate local agency representatives, and other applicable personnel;
- Coordination strategy (and special agreements if applicable) between DTM, RE, on-site traffic advisor, Maintenance, CHP and local agencies;
- Contractor's contingency plan;
- Standby equipment, State personnel, and availability of local agency personnel for callout (normally requires a Cooperative Agreement);
- Development of contingencies based on maintaining minimum service level.

G. RETROFITTING PROGRAMMED PROJECTS

Usually the extent of the TMP is to be determined prior to programming (PID approval). However, it may sometimes be necessary to retrofit a TMP to a project that is already programmed due to project changes, policy changes, emergencies or unforeseen conditions. These projects must be handled on a case by case basis since the course of action will depend on how far along the project development process is and how extensive the TMP needs to be. Retrofitted TMPs may require a TMP team and TMP Manager and involvement from all functional units as discussed earlier in these guidelines. The project manager is responsible for

A6-9 (Cont.)

initiating a TMP investigation since they are most knowledgeable of project status. Some suggestions for funding retrofitted TMP are:

Use of Minor Funds

Minor A and B money has been used to pay for TMP measures that total less than $1,000,000. The districts will not usually be reimbursed for this even though the FHWA agrees to participate (it is not economically feasible for the Department to process minor funds for reimbursement). There have been exceptions however, and that decision is at the discretion of the Federal Resources Branch in headquarters Budgets Program.

Charge to Other Project Phase 4 (Construction) Funds

Funds from other construction contracts in the district may be used if those projects are in the vicinity of, or will be affected by, the project requiring TMP funds. At the discretion of the Deputy District Director for Construction a list of chargeable project EAs may be submitted to headquarters Accounting for prorated charging. Very few Accounting staff are aware of the process required and headquarters Traffic Operations, Office of System Management Operations should be contacted for assistance.

Project Cost or Scope Changes

The CTC has delegated to the Director of the Department the authority to increase a project's cost by up to 20 percent without prior commission approval. This authority has been delegated to other Department managers as described in Project Management Directive PMD6. This increase can be used for TMP implementation and will be 100 percent reimbursable by the FHWA. The increased costs must be absorbed by other projects in the district since the total capital outlay allocation remains the same.

H. LOCAL INVOLVEMENT

The TMP Deputy Directive 60 applies to all projects on state facilities, including those not funded by the state. District Directors are responsible for assuring local compliance. Since many measure projects are split funded, the Department and local entities must work cooperatively to develop an effective TMP. The Department is responsible for approving all PSRs and it is at this point that agreements should be reached concerning the costs and scope of TMP measures.

III. CORRIDOR, REGIONAL AND MULTI-FUNCTIONAL AREA TMPS

When multiple or consecutive projects are within the same general corridor, the cumulative impact can result in excessive traffic delays and detour conflicts. These may be multiple capital projects, the involvement of more than one district, or a combination of capital projects and Encroachment Permit and/or Maintenance activities. Corridor or regional coordination will minimize or eliminate these impacts and reduce inconvenience to the motoring public.

When multiple projects are in the same corridor or on corridors within the same traffic area, it may be possible to develop a single corridor or regional TMP. In other cases, individual TMPs are developed and funded from their own sources, and a bare-bones corridor or regional TMP addresses the cumulative impact. Each project covered by corridor and regional TMP contributes resources in proportion to its traffic impact. During TMP implementation, the TMC serves as an information clearinghouse and coordinates operations. The TMC helps identify conflicts and recommends appropriate action. When provided with accurate and up-to-date lane closure information the TMC provides real-time traffic information via electronic media, CMS, and HAR.

A6-9 (Cont.)

The TMP Manager coordinates the development and implementation of corridor and regional TMPs. The TMP Manager forms a TMP team including, as a minimum, representatives from Construction, Maintenance, Public Affairs and Traffic Operations for each of the affected districts. The initial meeting is held several months in advance of the construction season to set milestones, and allow time to gather project information and prepare and distribute information.

The corridor/regional TMP may need elements in addition to those provided by the individual TMP for each project. Those elements may include changeable message signs at key locations outside individual project limits, the establishment of an information hot line and web-sites for all projects involved. The use of the statewide Caltrans Highway Information Network (CHIN) number (1-800-427-ROAD), and particularly the use of TMCs as a central reporting hub. The Northern Valley TMC in District 3 has established reporting procedures specifically for interregional TMPs that are obtainable from headquarters Traffic Operations.

IV. MAJOR LANE CLOSURE APPROVAL PROCESS

This process applies to all major lane closures on the state highway system. Major lane closures are those lane closures that are expected to result in significant traffic impacts despite the implementation of TMPs. A "significant traffic impact" is defined in DD-60 as (a) 30 minutes above normal recurring traffic delay on the facility, or (b) the delay threshold set by the DTM, whichever is less. When a planned lane closure is expected to have a significant traffic impact, Headquarters District Lane Closure Review Committee (DLCRC) review and approval is required. The functional unit directly involved in the work must submit the major lane closure request to the DLCRC for approval as detailed below.

A traveler's trip should not be increased by more than 30 minutes due to planned Department activities. The DTM may set a lower maximum if the economic impact of a delay over 20 minutes would be high. The lesser of these delay limits is the maximum delay threshold allowed for any activity. Only the DLCRC can approve a higher delay threshold for a project.

Additionally, it should be noted that TMP activities are comprehensive, and involve actions in addition to traffic management through the work zone, as detailed in these TMP Guidelines. All lane closure operations and other planned activities should be evaluated at the earliest possible developmental stage for potential impacts and mitigation strategies. Pre-implementation meetings and contingency plans remain important aspects of all lane closure operations to minimize impacts of unforeseen events.

A. THRESHOLD CRITERIA FOR LANE CLOSURES REQUIRING APPROVAL OF THE DLCRC

DLCRC review and approval is required when planned activities are expected to result in a traffic delay that exceeds 30 minutes or the delay threshold set by the DTM, which ever is less.

DLCRC review and approval is not required for emergency closures due to natural events or incidents. However, the DTM must be notified, and every effort must be made to minimize traveler delay and reopen traffic lanes as soon as practical.

Applicability

The DLCRC, comprised of the CHP, District Public Information Officer, and Deputy District Directors of Construction, Design, Maintenance and Operations, approves all requests for major lane closures that meet the above threshold criteria. The criteria are applicable for moving or static lane closure operations. The DLCRC will decide when to submit lane closure requests that

A6-9 (Cont.)

are of an interregional, statewide, environmental, or otherwise sensitive nature to the Headquarters Lane Closure Review Committee (HQLCRC) for their approval.

The DLCRC is responsible for determining when HQLCRC approval is required. The HQLCRC is comprised of the Division Chiefs for Construction, Maintenance, Design and Local Programs, and Traffic Operations along with the Headquarters Public Information Officer, and a representative from the CHP. The HQLCRC may review the closure or leave the decision to the DLCRC. The HQLCRC should be advised of all planned lane closures that exceed the above threshold criteria. All planned lane closures that exceed the above threshold criteria and are of an interregional, statewide, environmental, or otherwise sensitive nature, as determined by the district LCRC, may also require approval of the HQLCRC.

Contents of Major Lane Closure Request Submittal

The functional unit requesting the lane closure and responsible for its performance prepares a proposed lane closure submittal. Sufficient information is provided to ensure complete understanding of the proposal. The submittal is sent through the DTM for review before sending it on to the LCRC. If additional TMP efforts can reduce the expected additional delay to less then 30 minutes, then the closure does not have to go to the LCRC. The DLCRC/HQLCRC may require additional information during its review. At a minimum, the following information is recommended initially:

1. Location and vicinity maps showing the state highway(s), local street network, and other adjacent lane closures or nearby work that may affect traffic during the same period, including special events;
2. Dates, times and locations of the lane closure(s);
3. Brief description of the work being performed during the lane closure(s);
4. Brief description of each lane closure and its anticipated affect on traffic;
5. Amount of expected delay and corresponding queue length for each lane closure;
6. Summary of TMP strategies that will be used to reduce delay and motorist inconvenience during the lane closure(s) (refer to Table 1). A copy of the approved TMP for the project, if available;
7. Contingency plan (see "Contingency Plan" below).

B. EVALUATION

The LCRC is responsible for approving major lane closures and will use the items below for evaluating lane closure operations. In its evaluation of the proposal, the LCRC will give consideration to the accuracy, reliability, and completeness of information provided as well as other reliable sources of information available to the LCRC.

Proposals will be evaluated on the basis of effectiveness in the following areas:

- Promoting motorist and worker safety;
- TMP strategies;
- Plans for coordination with adjacent construction, maintenance, encroachment permits, and special events;

A6-9 (Cont.)

- Plans for coordination with TMC and field personnel;
- Plans for coordination with public media;
- Plans for use of existing field elements such as traffic surveillance loops, changeable message signs, highway advisory radio, and Closed Circuit Television cameras;
- Lines of communication and authority (top to bottom);
- Plans for monitoring delay (or corresponding queue length) during lane closure operations;
- Alternatives to proposed closures;
- Viability of contingency plans;

*C. **Post-Closure Evaluation Statement***

A Post-Closure Evaluation statement will be submitted to headquarters' Traffic Operations Program, Office of System Management Operations, on all projects that exceed expected delay or run outside of the closure window. No more than one page is suggested. The functional unit performing the lane closure will prepare the statement within five working days of the date the lane closure exceeded the threshold criteria. The statement should explain:

- The cause and impact of delays;
- Either actions taken or to be taken to avoid or mitigate an occurrence or recurrence;
- Why the expected delay was exceeded and/or why it was necessary to exceed the closure window;
- How the situation can be avoided in the future.

Post-closure evaluation statements are only for closures formally approved by the District LCRC under this process (i.e. exceed the lesser of 30 minutes or the DTM limit).

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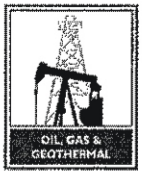
STATE OF CALIFORNIA, RESOURCES AGENCY
JUN 22 2009
ARNOLD SCHWARZENEGGER, GOVERNOR



DEPARTMENT OF CONSERVATION
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June 19, 2009

Mr. Michael Rosauer
California Public Utilities Commission
C/O Dudek
605 Third Street
Encinitas, CA 92024

Subject: Draft Environmental Impact Report (DEIR) for the Proposed Sacramento Natural Gas Storage Project, CPCN application No. 07-04-013, **SCH No. 2007112089**

Dear Mr. Rosauer:

The Department of Conservation (DOC), through its Division of Oil, Gas, and Geothermal Resources (DOGGR) and the California Geological Survey, has reviewed the above referenced project. The Department offers the following comments for your consideration.

Overview of DOGGR Responsibilities Related to Oil and Gas Operations.
DOGGR is mandated to supervise the drilling, operation, maintenance, and plugging and abandonment of wells and attendant facilities, including tanks and pipelines, for the purpose of preventing: (1) damage to life, health, property, and natural resources; (2) damage to underground and surface waters suitable for irrigation or domestic use; (3) loss of oil, gas, or reservoir energy; and (4) damage to oil and gas deposits by infiltrating water and other causes. DOGGR's State Oil and Gas Supervisor (Supervisor) has the authority to regulate the manner of drilling, operation, maintenance, and abandonment of oil and gas wells so as to conserve, protect, and prevent waste of these resources, while at the same time encouraging operators to apply viable methods for the purpose of increasing the ultimate recovery of oil and gas.

A7-1

DOGGR's programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring.

In California, all Class II injection wells are regulated by DOGGR under provisions of the Public Resources Code (PRC) and the federal Safe Drinking Water Act. Class II injection wells fall under the DOGGR's Underground Injection Control (UIC) program, which is monitored and audited by the U.S. Environmental Protection Agency. The main features of the UIC program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management,

and public outreach. Class II wells inject fluids associated with oil and natural gas production operations. Most of the injected fluid is brine that is produced when oil and gas are extracted from the earth.

DOGGR's regulations also include standards for construction, testing, inspection, and operation of pipelines within oil and gas fields; thereby reducing the risk of spills and/or leaks that may pose a threat to public health and safety or the environment. These regulations are a risk-based two-tiered system, where the regulatory emphasis is focused on the pipelines' location relative to any environmentally sensitive areas. The first tier has standards that apply to all pipelines and in the second tier has standards for pipelines within environmentally sensitive areas.

The scope and content of information that is germane to DOGGR's oil and gas authority are contained in Division 3 of the Public Resources Code (PRC), commencing with Section 3000. The administrative regulations are primarily found under Title 14 of the California Code of Regulations (CCR), Division 2, Chapter 4, commencing with Section 1712.

A7-1 (Cont.)

Legislation Strengthens DOGGR's Authority over Production Facilities. Please note that on September 29, 2008, the Governor signed AB 1960 (Chapter 562, Stats 2008). The legislation, which took effect January 1, 2009, substantially clarifies and strengthens DOGGR's authority over oil and gas production facilities, including tanks and other facilities attendant to oil field production or injection operations, as specified. Among other things, the legislation accomplishes the following:

- Requires DOGGR to adopt specific standards to ensure that production facilities are adequately maintained;
- Requires DOGGR to inspect production facilities to ensure compliance with its new facility standards;
- Increases to $25,000 the maximum penalty that DOGGR may impose for violations of requirements governing oil and gas operations;
- Specifically authorizes the Supervisor to issue cease-and-desist orders for production facilities found to be in violation of DOGGR requirements; and
- Provides for life-of-well and life-of-production facility bonding for operators with a history of noncompliance or outstanding liabilities. DOGGR will adopt standards for decommissioning of production facilities to assist in implementing the new bonding authority.

A7-2

DOGGR anticipates that AB 1960, together with the regulations that will be adopted to implement it, will greatly enhance the Division's oversight of oil and gas field operations.

Overview of California Geological Survey Responsibilities. The California Geological Survey (CGS), formerly known as the Division of Mines and Geology, is a

A7-3

division of the Department of Conservation. CGS operates seven major programs authorized under five Legislative Acts. The Survey originally was authorized by the State Legislature in 1860, and has been in continuous State service since 1880. It is administered by the California State Geologist.

The mission of CGS is to provide scientific products and services about the state's geology, seismology and mineral resources, including their related hazards that affect the health, safety, and business interests of the people of California. Among CGS's responsibilities are those related to mapping earthquake fault zones pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (PRC §§ 2621 *et seq.)* and mapping seismically-induced ground failure hazards other than those related to fault rupture, such as liquefaction and earthquake-induced landslides, pursuant to the Seismic Hazards Mapping Act (PRC, §§ 2690 *et seq.).*

CGS responds to emergency conditions created by geologic activities including operation of a clearinghouse for post-event earth science investigations; maintains a Geologic Library and public education programs, and facilitates and expedites the application of new research results to public policy (PRC §§ 2200 *et seq.).*

A7-3 (Cont.)

General Comments: These comments deal with entire document and are as follows:

Alternate Sites
DOGGR is unaware of how the alternate sites were selected. The alternate sites evaluations did not consider the number of existing plugged and abandoned wells that penetrate the alternate storage zone, nor was there much discussion as to whether the geology is adequate to support a gas storage project. These issues could have an impact on the viability of a gas storage project at these alternate sites.

A7-4

Wellhead vs. Wellhead Site
The usage of the terms "wellhead site", "wellhead", and "well" made the document difficult to follow. A wellhead is the equipment attached to the well casing above the ground surface. A wellhead site is the well pad surrounding the wellhead that provides the necessary space to drill, operate, and maintain the well and wellhead. The well includes the wellhead and the subsurface casing and equipment.

A7-5

Well drilling vs. HDD for pipeline
These two types of drilling operations, although similar in some ways, are very different. DOGGR regulates the drilling of the wells, yet has no jurisdiction over the HDD as part of the pipeline construction. The document lumps the two drilling types together in the discussion of mud programs, description of how a well is drilled, and at times the impacts of frac-out, which does not apply to well drilling. This made the document difficult to follow and unclear.

A7-6

Additional Comments. The following comments are specific to reference page and section. CGS comments are noted in parenthesis.

1. **[PAGE ES-2] A.1/2 Wellhead Site**
   "Five water tanks measuring 12 feet in diameter and 10 feet high..." will be at the wellhead site. The presence of these tanks appears only on the pages ES-2, B-13, B-31, and in Figure B-5 and does not include any discussion as to potential impacts the tanks may cause. Tanks used in natural gas storage operations to store produced water, are regulated by DOGGR pursuant to the California Code of Regulations, Title 14, Division 2, Chapter 4, Sections 1722 (a) and (i), 1724.2, 1773, 1774, and 1778. Although there is the possibility of leakage, tanks are required to be placed within a secondary containment to prevent contamination of fresh waters. DOGGR anticipates that AB 1960, together with the regulations that will be adopted to implement it, will greatly enhance the Division's oversight of oil and gas field operations, including tanks. These regulations will also address periodic corrosion testing and inspection of production facility tanks and associated equipment. — A7-7

2. **[PAGE ES-37] HAZ-2ai**
   This mitigation measure requires certain tests and indicates that DOGGR will monitor and approve these tests prior to allowing storage of natural gas. DOGGR is responsible for ensuring that the gas and water injected is confined to the zone of intent. As part of the evaluation of the gas storage project, DOGGR may require specific tests of the cap rock to determine its ability to restrict migration of gas. DOGGR will evaluate the geologic data, and if necessary require additional testing to evaluate the competency of the cap rock. If testing is required as part of the mitigation measures beyond what DOGGR determines is necessary to ensure that the gas and water injected is confined to the zone of intent, DOGGR will review and provide comments regarding these test results, but will not independently monitor or approve the tests. — A7-8

3. **[PAGE ES-37-38] HAZ-2aii**
   This mitigation measure states the number, location, depth, screened interval, and instrumentation of the deep aquifer monitoring wells that will be selected by qualified petroleum industry and groundwater experts. DOGGR is responsible for ensuring that the gas and water injected is confined to the zone of intent. As part of the evaluation of the gas storage project, DOGGR may require monitoring wells to determine the containment of the stored of gas. This decision will be made after DOGGR has performed a complete review of the project application and the associate data. If monitoring is required as part of the mitigation measures beyond what DOGGR determines is necessary to ensure that the gas and water injected is confined to the zone of intent, DOGGR will review and provide comments regarding these monitoring results, but will not independently monitor or approve the monitoring plan. — A7-9

4. **[PAGE ES-41-42] HAZ-2bii**
DOGGR's programs includes the regulatory authority over: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring. DOGGR looks forward to the opportunity of working with other regulatory agencies to ensure the safety of the proposed project. We would hope that this would include discussions and clarifications of the different regulatory agencies' authority.

A7-10

5. **[PAGE ES-49] H-8a**
DOGGR will also require that a spill contingency plan, or an equivalent SPCC, be submitted for approval (14 CCR § 1722(b).). It is our hope that whichever plan is submitted, that it will meet the requirements of all the regulatory agencies.

A7-11

6. **[PAGE ES-50] H-8b**
This mitigation measure infers that if the groundwater monitoring program should detect potential contamination, the gas storage activity shall be suspended and the reservoir will be depressurized. DOGGR is the regulatory agency that is mandated to oversee the injection of natural gas to ensure that damage does not occur. This not only includes an extensive permitting process, but also regular testing and monitoring program. If unusual pressures are observed or a potential for contamination is identified, DOGGR will evaluate the data and take the necessary steps to eliminate the threat to life, health, property, and natural resources. This may include suspending injection and depressurizing the reservoir, however, the final determination of what actions are to take place will be made only after a full review of the data. If through testing and monitoring, it is determined that the gas being injected is not confined to the intended zone, DOGGR will take steps to restrict injection and eliminate the threat to life, health, property, and natural resources.

A7-12

7. **[PAGE A-6] Table A-1, State Agencies, 6th line**
The statement "Conditional waiver to use drilling mud pits to contain drilling mud during the drilling process" is inconsistent with statements on page ES-36, HAZ-1b, which indicates SNGS, LLC shall contain drilling mud and cuttings from well drilling and HDD in portable tanks.

A7-13

8. **[PAGE B-2] Florin Gas Field**
Clarification is needed of the "DOGGR gas field mapping". DOGGR field mapping used in the document was not determined by well drilling information or geologic study but is a computer generated boundary developed by GIS software drawing a 500-foot boundary around producing wells. DOGGR does have administrative boundaries that are not reflected in the document. Administrative boundaries for a new field are determined by a new area of oil or gas production with accumulation being controlled by a separate structural (geological) feature and/or stratigraphic

A7-14

condition. An extension of an existing field to the extent that the new discovery is not considered a new area, pool, or extension of a pool, the wells must be able to sustain continuous commercial production for six months, and the boundary is extended around the well using section lines or portions of section lines. DOGGR would like to clarify that "DOGGR gas field mapping", as indicated in the document, is not used in the evaluation of an injection project.

A7-14 (Cont.)

9. **[Figure B-2] Florin Gas Field**
The location of the eight plugged and abandoned wells in Florin Gas field should be identified on the project maps.

A7-15

10. **[Figure B-4] Subsurface Diagram of Florin Gas Field**
The document refers to the gas storage area as being about 3,800 feet from surface. Figure B-4 is unclear, as it indicates that the bottom of the gas storage area is at 3800 feet, as opposed to the top, causing some confusion.

A7-16

11. **[PAGE B-21] B.4.2.2 Wellhead Construction**
This section deals with two separate aspects of the "wellhead". The first aspect deals with the well pad and the surface drilling equipment. The second aspect deals with the actual drilling of the well. This explanation falls short, as it fails to discuss many key aspects of drilling operations, such as well casing, blowout prevention equipment, cementing operations, well completion operations, well testing, and well logging, to list a few. Reference material to better explain well drilling operation can be found in several DOGGR publications such as: *Testing Oil and Gas Wells for Water Shutoff (M06)*, *Blowout Prevention in California (M07)*, *and Evaluation and Surveillance of Water Injection Projects (M13)*. This, and other material, can be found on our website at www.conservation.ca.gov. The reference that the well drilling is similar to HDD is misleading. There are different technical challenges between well drilling and HDD.

A7-17

12. **[PAGE B-27] Table B-3, Estimated Construction Vehicle Types and Duration of Use**
DOGGR believes that "Drill rig" should be included. "Drill rig (HDD)" is used for the pipeline construction and not for the well drilling operations.

A7-18

13. **[Page B-28] B.6 Abandonment of Project**
The second bullet states, "The gas will be abandoned in place according to the requirements of the DOGGR in place at the time of abandonment." This is confusing and does not make sense because the injected gas will not be left in place. Perhaps this statement was referring to the plugging of the wells.

A7-19

14. **[Figure C-1 through C-4] Gas Fields**
The location of the active and plugged and abandoned wells in the various gas fields should be identified on the project maps.

A7-20

15. **[PAGE D.5-4] Underground Field Conditions, 2nd Paragraph**
This paragraph states that the shale cap is 150 to 500 feet thick; however, previous statements indicate it is 150 to 300 feet thick (Page A-4, 5th paragraph, Page B-10, 3rd paragraph). A7-21

16. **[Page D.5-8] Other Potential Hazards**
The second paragraph starts off by stating that no faults have been mapped within the Proposed Project. Information submitted to DOGGR, by the project applicant, indicates that there is a fault running through the Florin field. It is unclear if the statement made in the document was only referring to a fault identified in a Alquist-Priolo Earthquake Fault Zone or any fault. A7-22

17. **[PAGE D.5-10] D.5.1.4 Mineral Resources, City of Sacramento (CGS)**
The DEIR states that a portion of the Proposed Project area located in the City of Sacramento is classified Mineral Resource Zone 2 (MRZ-2) because of the area's high potential for mineral resources. The DEIR states the high potential for mineral resource is because of the area's historical use as a natural gas production field. This is not correct.

The MRZ-2 mineral classification does not refer to the area's historical use as a natural gas production field, but rather to the significance of the economic value of Portland Cement Concrete grade (PCC) construction aggregate deposits over the area. A7-23

18. **[PAGE D.5-11] Section D.5.2.1 – State Regulations (CGS)**
California Seismic Hazards Mapping Act: Seismic Ground Shaking Hazards
This section refers to Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (California Geological Survey, 1997). For clarity, these Guidelines substantially have been revised and republished as Special Publication 117A, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (California Geological Survey, 2008).

California Building Code
The DEIR cites the California Building Code (CBC-2001) as the standard for construction. The 2001 edition of the CBC no longer is accepted in California. The standard should be to the 2007 California Building Code. A7-24

19. **[PAGE D.5-12] Department of Conservation, Division of Oil, Gas, and Geothermal Resources**
The document is not quite complete in the description of DOGGR responsibilities. Please refer to our earlier comment found under: **Overview of DOGGR Responsibilities Related to Oil and Gas Operations.** A7-25

20. **[PAGE D.5-17] Section D.5.3.3. – Geology and Soils Impact Analysis (CGS)**
Impact G-2 – Exposure of People or Structures to Strong Seismic Ground Shaking
The methodology employed in the DEIR calculates a peak ground acceleration for a 10% probability of exceedance in 50 years of about 0.19g. The calculation should be performed again used the latest accepted value of 2/3 of 2% of exceedance in 50 years based on the New Ground Attenuation (NGA) values now required in the California Building Code for this area. A7-26

21. **[PAGE D.6-10] Gas Wells, Pipelines, and Pipeline Safety, DOC, DOGGR, 1st sentence**
This sentence should be amended "…DOGGR is responsible for ~~reviewing~~ regulating the drilling, operation, and maintenance of natural gas wells." A7-27

22. **[PAGE D.6-11] California Code of Regulations**
This discussion of relevant regulations should also specifically reference all of CCR Title 14, Division 2, Chapter 4, Subchapter 2, entitled Environmental Protection (14 CCR §§ 1750 et seq.). A7-28

23. **[PAGE D.6-16] Impact HAZ-1b** Wellhead Site
Reference is made to the toxic nature of drilling mud. The drilling mud should not be toxic and should not be contaminated with oil and other chemicals during drilling. The use of oils or other toxic chemicals during drilling is not allowed, and oil should not be encountered as this is a non-associated gas producing field, a gas field where gas production is not associated with oil production. A7-29

24. **[PAGE D.6-19] Impact HAZ-2**
There is a concern that natural gas may migrate from the reservoir through existing wells or cracks in the cap rock. DOGGR's regulatory program is designed to ensure injected gas in confined to the intended zone of injection. This includes an evaluation of the geology, injection program, well construction design, and operating parameters for the storage project. The existing plugged wells have been plugged to current standards. As mentioned earlier, DOGGR will evaluate the geologic data, and if necessary, require testing of the cap rock to ensure containment of the injected gas. Project approval will only be granted when data supports confinement of the injected gas. A7-30

25. **[PAGE D.6-23] Potential Gas Migration Through Existing Cracks or Faults in the Cap Rock**
A reference is made (Khilyuk et al. 2000) that indicates leakage of stored gas has occurred at the El Segundo, Castaic Hills, and Montebello oil fields. The historic well activity in El Segundo, Castaic Hills, and Montebello oil fields is different than that of Florin Gas. Florin gas was discovered in 1977, using very much the same standards that we have today. The other three fields were discovered from 1917 through 1951, when drilling and plugging standards were not as strict as they are today. DOGGR, A7-31

the regulatory state agency responsible for maintaining drilling and operation data for oil and gas operations, does not agree with many of the findings of the Khilyuk study. For example, Castaic Hills oil field has never even had a gas storage project, and there are no records that indicate the El Segundo Oil field leaked stored gas.

A7-31 (Cont.)

26. [PAGE D.6-33] HAZ-2ai and HAZ-2aii

These mitigation measures state that tests recommended and approved by qualified industry experts will be conducted. DOGGR is responsible for ensuring that the gas and water injected is confined to the zone of intent. As part of the evaluation of the gas storage project, DOGGR may require monitoring wells or tests to determine the containment of the stored gas. DOGGR is the regulatory agency that is mandated to oversee the injection of natural gas to ensure that damage does not occur. This not only includes an extensive permitting process, but also regular testing and monitoring programs. If unusual pressures are observed or a potential for contamination is identified, DOGGR will evaluate the data and take the necessary steps to eliminate the threat to life, health, property, and natural resources. This may include suspending injection and depressurizing the reservoir, however, the final determination of what actions are to take place will be made only after a full review of the data. If through testing and monitoring, it is determined that the gas being injected is not confined to the intended zone, DOGGR will take steps to restrict injection and eliminate the threat to life, health, property, and natural resources. If monitoring is required as part of the mitigation measures beyond what DOGGR determines is necessary to ensure that the gas and water injected is confined to the zone of intent, DOGGR will review and provide comments regarding these monitoring results, but will not independently monitor or approve the monitoring plan.

A7-32

27. [PAGE D.6-36] 1st and 2nd bullets

DOGGR's programs includes the regulatory authority over: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oilfield tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring. DOGGR looks forward to the opportunity of working with other regulatory agencies to ensure the safety of the proposed project. We would hope that this would include discussions and clarifications of the different regulatory agencies' authority.

A7-33

28. [PAGE D.7-25] 2nd paragraph, 7th line and [PAGE D.7-29] 2nd paragraph, 5th line

DOGGR suggests that the following addition be made to clarify that "frac-out" is related to Horizontal Directional Drilling (HDD) during pipeline construction. "An inadvertent release of drilling mud (frac-out) during HDD drilling could result in sedimentation and turbidity to nearby water resources."

A7-34

29. [PAGE G.6] G.7.3 General Reporting Procedures
This section is confusing and DOGGR is unclear as to what, if anything is required from DOGGR. DOGGR will maintain monitoring records that are submitted to DOGGR. This includes monitoring data that goes above and beyond what is required by DOGGR.

A7-35

30. [PAGE G.22] Table G-2, 4b
DOGGR has no direct authority with regard to this mitigation measure, and therefore DOGGR should not be listed as an agency whose approval is needed to implement the measure.

A7-36

31. [PAGE G.28] Table G-1, HAZ-2ai and [PAGE G.29] Table G-1, HAZ-2aii
These mitigation measures states that tests recommended and approved by qualified industry experts will be conducted. DOGGR is responsible for ensuring that the gas and water injected is confined to the zone of intent. As discussed in comment #26, as part of the evaluation of the gas storage project, DOGGR may require monitoring wells to determine the containment of the stored of gas. If monitoring is required as part of the mitigation measures beyond what DOGGR determines is necessary to ensure that the gas and water injected is confined to the zone of intent, DOGGR will review and provide comments regarding these monitoring results, but will not independently monitor or approve the monitoring plan.

A7-37

32. [PAGE G-44] Table G-1, H-8b
This mitigation measure infers that if the groundwater monitoring program should detect potential contamination, the gas storage activity shall be suspended and the reservoir will be depressurized. DOGGR is the regulatory agency that is mandated to oversee the injection of natural gas to ensure that damage does not occur. This not only includes an extensive permitting process, but also regular testing and monitoring. If through testing and monitoring, it is determined that the gas being injected is not confined to the intended zone, DOGGR will take steps to restrict injection and eliminate the threat to life, health, property, and natural resources. (See comment #6)

A7-38

Thank you for the opportunity to comment on the Sacramento Natural Gas Storage Project DEIR. If you have any questions regarding our comments, or require technical assistance or information, please contact me at (916) 323-1777.

A7-39

Sincerely,

Robert S Habel

Robert S. Habel
Chief Deputy

cc: Mike Stettner, Division of Oil, Gas, and Geothermal Resources, Sacramento

Document No. A8

From: Armstrong, Scott [mailto:Scott.Armstrong@calibresys.com]
Sent: Monday, June 22, 2009 8:44 PM
To: John Westermeier; rosauer@cpuc.ca.gov
Cc: Brawner, William T Mr CTR USA ACSIM
Subject: Army comments on the SNGS EIR for the Depot Park
Importance: High

Hello Mr. Westermeier and Mr. Rosauer. My name is Scott Armstrong. I met Mr. Westermeier at the public meeting on April 28, 2009 in regard to the SNGS project at the Former Sacramento Army Depot but haven't yet had a chance to me you Mr. Rosauer. I am the Army BRAC Environmental Coordinator for the ongoing cleanup effort and have enclosed the following comments with regard to the EIR:

1. Section D.6.1.2, Compressor Station, pg D6-3:
   "According to the environmental site assessment, all soil contamination has been fully remediated and no further action is required. Groundwater contamination on site and down gradient of the site was being remediated during conduction of the environmental site assessment. The U.S. Army has accepted responsibility for all on-site contamination and any future contamination found within the boundaries of Depot Park."

   - **The Army is responsible for all contamination associated with their "past" activities before transfer. The Army is not responsible for any on-site contamination or any future contamination associated with activities that have or may occur after the transfer of the property to the City of Sacramento.**

A8-1

2. Section D.6.3.3, page D.6-16, Impact HAZ-1b: Potential Hazards Associated with the Generation and Disposal of Drilling Mud and Cuttings from Well Drilling and Horizontal Directional Drilling (HDD), Well Head Site:
   - **This section should address volatile organic contamination, primarily TCE, in several groundwater aquifers which may be encountered during drilling activities. Presently there is no mention of known environmental contaminates that will be encountered.**

A8-2

3. Section D.7.1.3, pg. D.7-4, Groundwater
   - **There should be some discussion of volatile organic contaminated groundwater and the associated pumping infrastructure related to the Army Treatment System i.e.; number of monitoring wells and extraction wells within the footprint of the proposed construction areas, effluent discharge piping, electrical distribution to extraction wells, and capping associated with the Corrective Actions Management Unit (CAMU), etc. This document lacks any indication of where the present infrastructure is located and how it will be impacted by the construction activities related to this EIR.**

A8-3

4. Section D.7.3.3, Impact and Mitigation Sections regarding Groundwater :
    - **Shallow aquifers may be impacted by groundwater contamination and this section/subsections doesn't appear to address possible groundwater contamination impacting the development water, water encountered during drilling, or cross contamination by drilling through multiple aquifer zones.**

A8-4

5. Section D.8.1.1 Existing Land Uses, Wellhead, Compressor Station, and Florin Gas Field, pg D8.2 second paragraph:
    - **Land use controls are mentioned but it may be pertinent to call these out so that the reader understands the restrictions placed on the property before the Army completed the transfer to the city. This could be done by simply mentioning Section D.8.2.1 Federal Regulations which delineates the LUCs.**

A8-5

I appreciate your attention to these comments and look forward to helping you with any questions you may have in the future with regard to this project or incoporating Army information to help you facilitate further work with the SNGS project. My contact information can be found in the signature line footer of this email.

Respectfully,
Scott Armstrong

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Document No. A9

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair

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Arnold Schwarzenegger
Governor

22 June 2009

Michael Rosauer
CPUC Project Manager
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT, SACRAMENTO NATURAL GAS STORAGE PROJECT, SACRAMENTO COUNTY, SCH #2007112089

We have reviewed the April 2009 *Draft Environmental Impact Report* (DEIR) for the proposed Sacramento Natural Gas Storage Project in Sacramento County. Our review focuses on water quality aspects of the project provided in Sections D.6 and D.7 of the DEIR.

Section D.7 of the DEIR discusses hydrology and water quality. For Impact H-8, the DEIR states that natural gas can enter the groundwater aquifer through faults or discontinuities in the cap rock, which is very unlikely given the geologic structure that initially made this an economically viable gas reservoir, or through abandoned or operating wells that are not properly sealed. The DEIR also states that there is sufficient evidence to conclude that the leakage of gas into the overlying groundwater aquifer is unlikely to occur. It also states that if leakage occurs, that there could be substantial impacts to the aquifer. **A9-1**

Mitigation measures include H-8b to install groundwater monitoring wells in two aquifers above the gas field, obtain baseline samples prior to any drilling activities, and to monitor the wells during operation of the gas storage field. If hydrocarbon levels increase above baseline, gas storage activities would be suspended and the reservoir would be allowed to depressurize until the source is found and corrected. The DEIR also states that groundwater remediation may be necessary. **A9-2**

We have the following comments that should be addressed in the Final EIR:

1) The Final EIR should identify the protocols that were used for abandoning the old gas wells and whether they were intended to allow future use of the formation for storage of natural gas up to the proposed 8% above the original gas fields. **A9-3**

2) The Final EIR should identify which regulatory agency will: review proposals for the number, location, and screened intervals of groundwater monitoring wells that will be installed; how often will they be monitored; and review any groundwater monitoring reports produced from the monitoring data. **A9-4**

3) The Final EIR should identify approximately how many baseline groundwater samples will be collected and over what time period, whether the baseline values will be statistically-based, what criteria will be used to verify an exceedance over the baseline values, and what parameters will be monitored. Given that natural gas consists of methane, it is not clear what the characteristics and potential severity of the water quality impacts might be from a release of natural gas into the groundwater aquifer. A9-5

4) The Final EIR should identify what mechanism will be used to enforce the suspension of storage activities and depressurization of the field if a release occurs, how long the depressurization will take, how the leak might be located and corrected given that the formation will be depressurized, and which agency will oversee groundwater remediation. A9-6

Thank you in advance for considering our comments. If you have any questions, please call me at (916) 464-4622.

WILLIAM BRATTAIN, P.E.
Water Resources Control Engineer
Title 27 Permitting and Mining

cc: State Clearinghouse, Sacramento
Darrin Polhemus, Division of Water Quality, SWRCB, Sacramento

Document No. A10

COMMUNITY DEVELOPMENT DEPARTMENT

CITY OF SACRAMENTO
CALIFORNIA

RIVER DISTRICT SERVICE CENTER
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SACRAMENTO, CA 95811

ENVIRONMENTAL PLANNING SERVICES

916-808-7931

June 22, 2009

California Public Utilities Commission
Environmental Review Team
Attention: Michael Rosauer
505 Van Ness Avenue
San Francisco, CA 94102

Re: Sacramento Natural Gas Storage Project
Proceeding No. 07-04-013
REVISED City of Sacramento Comments on the Draft EIR (SCH #2007112089)

Dear Mr. Rosauer:

Thank you for providing the City of Sacramento with a copy of the Draft EIR for the Sacramento Natural Gas Storage (SNGS) project. We appreciate the opportunity to review and comment on the document. **A10-1**

References

The Army Depot Reuse Plan is incorrectly referred to as City Agreement "95-07" on pages D.3-31, D.3-32, D.8-8, D.8-20 (Table D.8-2), D.8-23, D.8-24 D.8-42, and D.8-43; the correct agreement number is "95-070." **A10-2**

The Draft EIR refers to the Sacramento City Code as the "Municipal Code." The Draft EIR should refer instead to the "Sacramento City Code." (Sacramento City Code Section 1.04.010) **A10-3**

Land Use: 2030 General Plan and Master EIR

The City of Sacramento 2030 General Plan was adopted by the City Council on March 3, 2009. The City Council also certified the Master EIR for the 2030 General Plan on that date.

The Draft EIR should be based on and refer to the 2030 General Plan, and references to the previous general plan should be deleted. See, e.g., page D.6-45. The South Sacramento Community Plan has **A10-4**

been rescinded and references to the plan should be deleted. See, e.g., pages D.8.7; D. 8.8; Table D.8-2 at page D.8-10; Table D.8-3 at page D.8-29; Table D.8-4 at page D.8-38.

A10-4 (Cont.)

In addition to these changes the Draft EIR should, as noted below, identify the relevant policies of the 2030 General Plan.

The Land Use, Agriculture, and Recreational Resources (Section D.8) addresses existing and planned land uses and zoning. The chapter contains a significant number of statements that are now obsolete based on adoption of the 2030 General Plan. Any statements referring to the update to the City's General Plan as being proposed or in process should be removed. Similarly, all references to previously adopted community plans should be removed. The 2030 General Plan is the sole guiding plan for land use in the City of Sacramento. Figure D.8-3a should be removed. Figure D.8-3b depicts the 2030 General Plan land uses; there are no separate land uses for the community plan area.

A10-5

Much of the land use analysis in the Draft EIR's section D.8 (Land Use) focuses on the wellhead and compressor site. The analysis fails to consider the land use effects of the underground natural gas storage use. This letter identifies several aspects of land use and general plan policy that have not been addressed in the Draft EIR, particularly with respect to the underground natural gas storage component of the project.

The underground gas storage field is located in the Avondale-Glen Elder neighborhood. The majority of the Avondale-Glen Elder neighborhood is designated on the Land Use and Urban Form Diagram on page 2-33 of the 2030 General Plan as "Suburban Neighborhood Low." There is also a designation of "Parks and Recreation" over a small portion of the neighborhood.

Suburban Neighborhood Low is a land use category described in the General Plan as allowing the following uses: "...housing and neighborhood-support uses including...single-family detached dwellings, single-family attached dwellings, accessory second units, limited neighborhood-serving commercial on lots three acres or less, (and) compatible public, quasi-public, and special uses." (2030 General Plan, Part Two, LU 4, Page 2-44.)

The proposed project is not a residential use or a small-scale neighborhood commercial use, and the EIR should address whether the Suburban Neighborhood land use designation might encompass an underground gas storage field as a "compatible public, quasi-public and special use." Public and quasi-public uses are defined on page App-64 of Appendix E of the General Plan as "Institutional, academic, governmental, and community service uses, either owned publicly or operated by non-profit organizations, including private hospitals and cemeteries."

A10-6

Goal 8.1 of section LU 8, states "Public/Quasi-Public. Provide for governmental, utility, institutional, educational, cultural, religious, and social facilities and services that are located and designed to complement Sacramento's neighborhoods, centers, and corridors and to minimize incompatibility with neighborhoods and other sensitive uses." Policies following this goal address public places, including community meeting facilities and parks, architectural design of public facilities, compatibility of non-city governmental facilities, public art, collocation of community facilities, college campuses, medical facilities and airport area planning.

Goal 8.2 of section LU 8, states "Special Uses. Provide for the development of Special Uses (e.g., assembly facilities, live-work studios, and care facilities) that are included within several Land Use and Urban Form Designations." Policies following this goal address assembly facilities for social, cultural,

educational and religious organizations, artist live-work studios, care facilities, child care and farmers markets.

The emphasis in these goals and policies is on uses that either serve the neighborhood in which they are located, or larger uses serving the broader community that can be conducted in a manner that is compatible with nearby neighborhoods. A key consideration for this project will be whether it can be conducted in a manner that is compatible with nearby neighborhoods.

While many potentially dangerous activities may exist in neighborhoods, either as a result of normal residential activities or due to pre-existing conditions in the area, the 2030 General Plan seeks to minimize harm and protect public safety in the future by regulating land use and development appropriately. As indicated in the Vision and Guiding Principles (Part 1 of the 2030 General Plan), "Sacramento will promote the health and well-being of the community and will plan for the long-term safety of its citizens."

A10-6 (Cont.)

The Draft EIR should include an analysis of the project's potential to conflict with or impede the following policies:

LU 2.1.1 Neighborhoods as a Basic Unit. *Recognizing that Sacramento's neighborhoods are the basic living environments that make-up the city's urban fabric, the City shall strive through its planning and urban design to preserve and enhance their distinctiveness, identity, and livability from the downtown core to well integrated new growth areas.*

Concern: By introducing the potential for fugitive gas migration to the surface and possible negative health effects, fire or explosion, as indicated in the Draft EIR in on page D.6-25 (Impact HAZ 2a), a hazardous condition could be introduced to the neighborhood. As a result, the project could disrupt an established land use and conflict with the City's policy to protect the neighborhood's livability.

A10-7

LU 2.1.2 Protect Established Neighborhoods. *The City shall preserve, protect, and enhance established neighborhoods by providing sensitive transitions between these neighborhoods and adjoining areas, and requiring new development, both private and public, to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood.*

Concern: By introducing a potentially hazardous condition to the neighborhood, the project could disrupt an established land use and conflict with the City's policy to preserve, protect and enhance established neighborhoods, and the proposed project would fail to respect and respond to existing physical characteristics (the presence of a residential neighborhood above the proposed storage component).

A10-8

LU 2.1.3 Complete and Well-Structured Neighborhoods. *The City shall promote the design of complete and well-structured neighborhoods whose physical layout and land use mix promote walking to services, biking, and transit use; foster community pride; enhance neighborhood identity; ensure public safety; are family-friendly and address the needs of all ages and abilities.*

Concern: By introducing a potentially hazardous condition to the neighborhood, the project could disrupt an established land use and conflict with the City's policy to ensure public safety in neighborhoods.

A10-9

LU 2.1.6 Neighborhood Enhancement. *The City shall promote infill development, redevelopment, rehabilitation, and reuse efforts that contribute positively (e.g., architectural design) to existing neighborhoods and surrounding areas.*

Concern: By introducing a potentially hazardous condition to the neighborhood, the project could disrupt an established land use and conflict with the City's policy to promote development that contributes positively to the neighborhood and surrounding areas. Furthermore, a blighting effect could occur in the neighborhood as a result of reduced desirability of the neighborhood as a safe place to live, lowered property values and disinvestment due to potentially hazardous conditions in the area.

A10-10

LU 2.8.3 High-Impact Uses. *The City shall avoid the concentration of high-impact uses and facilities in a manner that disproportionately affects a particular neighborhood, center, or corridor to ensure that such uses do not result in an inequitable environmental burden being placed on low-income or minority neighborhoods.*

Concern: As indicated in section D.10, Population and Housing, of the Draft EIR, the neighborhood located over and surrounding the Florin Gas Field is a minority neighborhood with a level of unemployment that is more than double the countywide average. City policy seeks to avoid concentrating high-impact uses in low-income or minority neighborhoods. By introducing a potentially hazardous condition to the neighborhood, the project could be in conflict with the City's policy to avoid social justice impacts on low-income communities, such as Avondale Glen Elder, that would be disproportionately impacted.

A10-11

LU 7.2.7 Hazardous Industries. *The City shall require industrial uses that use solvents and/or other toxic or hazardous materials to be sited in concentrated locations away from existing or planned residential, commercial, or employment uses and require the preparation of Hazardous Substance Management Plans to limit the possibility of contamination.*

Concern: By introducing a potentially hazardous condition to the neighborhood, the project could disrupt an established land use and conflict with the City's policy to site hazardous materials away from residential uses.

A10-12

GOAL PHS 3.1 Reduce Exposure to Hazardous Materials and Waste. *Protect and maintain the safety of residents, businesses, and visitors by reducing, and where possible, eliminating exposure to hazardous materials and waste.*

Concern: By introducing a potentially hazardous condition to the neighborhood, the project could disrupt an established land use and conflict with the City's policy to ensure public safety in neighborhoods.

A10-13

GOAL ER 1.1 Water Quality Protection. *Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American rivers, and their shorelines.*

Concern: As indicated in section D.7 of the Draft EIR, the project could introduce contamination into the aquifer and may conflict with the City's policy to protect groundwater resources.

A10-14

Inclusion of additional General Plan analysis as noted above is required for compliance with CEQA Guidelines section 15125(d), and will provide essential discussion for the public and decision-makers.

Hazards Impact H-8 re: contamination of the aquifer

The potential for contamination of aquifers is covered in Impact 2a and Impact H-8. These discussions are based on related discussions elsewhere in the Draft EIR. The basis for the conclusions should be better supported, as discussed below.

The geology characteristics of the Florin Gas Field are described on page B-9 et seq. The text indicates there is a sequence of alternating layers of sand and shale deposited in ancient seas. A porous sandstone unit within the Winters Formation measuring approximately 150-feet thick formed the Florin Gas Field. An impermeable shale cap measuring approximately 150- to 300-feet thick above the sandstone unit prevented the natural gas from escaping. (Page B-10)

Groundwater resources are described in Section D.7.1.3 at page D.7-2 et seq. The text notes that in the Sacramento area usable groundwater may occur outside of the identified mapped basin.

The text indicates that the "shallow aquifer" extends from 65 to 75 feet below the surface to approximately 200 to 300 feet below the ground surface. The base of the deep aquifer extends to as much as approximately 1,300 feet below the ground surface. Cap rock consisting of shale from 150- to 300- feet thick occurs below the aquifer and forms a seal that has contained the natural gas below this aquifer. (Page D.7-5)

The text indicates that "usable groundwater occurs outside of these identified and mapped basins." (Page D.7.2) It is unclear whether the text intends to imply that contamination could occur throughout the depth of the well casing, i.e., from surface to the Florin Gas Field located approximately 3,800 feet below the surface and below the cap rock. Impact H-8 refers only to "the aquifer" which in the context of the discussion appears to relate only to the Sacramento Valley Groundwater Basin, South American Subbasin. This should be clarified as information that would be relevant to an assessment of the project risk.

The text refers to "cap rock" that "...forms a seal that has contained the natural gas below this [deep] aquifer." (page D.7-5) The text should clarify whether this is the same "cap rock" that is referenced on page B.10. This discussion makes it appear that the deep aquifer and the gas field are separated only by the cap rock layer, whereas if the deep aquifer terminates at 1,300 feet the two would be separated by 2,500 feet of sand and shale. The text should indicate whether there are other confining or relatively impermeable layers that may also impede vertical migration of gas and/or groundwater. This is information that is relevant to an assessment of the project risk.

Gas seepage through the cap rock is discussed in several locations. One aspect mentioned several times is that the analysis to date is "...based on information available on the cap rock but does not include laboratory testing." (See, e.g., page D.6-24, item 2) This implies that laboratory testing would be meaningful, and will occur. If DOGGR will review the laboratory testing results, and will be responsible for denying well permits if the results support such action, this should be clearly referenced in the document. If current regulations require such testing these should be referenced and if not a mitigation measure should be included requiring such review and action as appropriate. It is the City's understanding, based on conversations with representatives of DOGGR, that DOGGR will require such testing as part of its permit procedures (see Table A-1, page A-6) and that such testing will be sufficient to identify potential risks.

A10-15

The Draft EIR identifies the threshold for hazards as creating "...a significant hazard to the public or environment through *reasonably foreseeable* upset and accident conditions..." (Page D.6-14) The text concludes that Impact HAZ-2a (Potential Impact from Gas Leaking From the Gas Reservoir After Repressurization of the Gas Field for Gas Storage) is significant and unavoidable (page D.6-25). The discussion indicates, at various times, that the leakage of stored gas into the overlying groundwater aquifer and perhaps to the ground surface is *unlikely to occur*; that there is not sufficient information to conclude *categorically* that stored gas migration to the overlying groundwater aquifer and/or surface water would not occur; there is a *low potential* that gas could migrate to the overlying aquifer; there is a *low probability* for substantial consequences from fire and explosions; and that the *possibility* of a gas release would remain even with mitigation. (Page D.6-25). The text should clarify that the EIR utilizes the term "significance" as meaning a "substantial or potentially substantial adverse change" (CEQA Guidelines Section 15382), and, if true, that the significance conclusion was reached based on the urban setting of the project and the substantial consequences that would follow from an upset event. If this is not the analysis followed, the EIR should clearly identify the basis for the significance conclusion.

A10-15 (Cont.)

The Draft EIR text refers to the Golder report and its analysis of the cap rock. (See, e.g., page D.6-23) The text indicates that an impact remains because even though the Golder Report concluded that gas would be expected to migrate only a small fraction of an inch a year, the report considered only the cap rock matrix (shale) physical properties and was "...not intended to account for possible localized imperfections (faults, fractures, course-grained channels with the cap rock shale) that could provide pathways for gas migration." (Page D.6-25) If the deep aquifer and gas field are separated by 2,500 feet, and gas travels approximately one inch per year, it would be important to know whether alternative routes as implied here are present. The EIR should indicate when, and how, the applicant would be required to characterize and model geologic conditions to assess the potential for alternative pathways identified in the Draft EIR text cited.

Utilities: Hazards: Reporting

The City Department of Utilities (DOU) will monitor the project to ensure maintenance of water quality and avoidance of aquifer contamination. In connection with its activities, the DOU may require the installation of monitoring wells. In order to determine the scope of any such program of enforcement and monitoring, and to avoid duplication to the greatest extent, the DOU should have access to all reports submitted by the applicant to DOGGR in connection with the project. This should be included as a mitigation measure (for example, in connection with Impact H8b).

A10-16

Utilities: Florin Potable Water Storage Reservoir

The City's Florin Potable Water Storage Reservoir and Booster Pump Station are located sub-grade and above the proposed gas field. The reservoir is located in Danny Nunn Park.

The reservoir stores water and has pumps that distribute the water back into the City's water distribution system. This facility is not a confined space and is rated for continuous occupancy (i.e. workers may use the facility for maintenance and operations without special equipment).

A10-17

The operation of the proposed project could increase risk to workers at the reservoir due to potential leakage of natural gas. This risk could be reduced by implementation of the following mitigation measure:

The applicant shall be required to install (or fund the installation) to the satisfaction of the City 's Risk Management Office a natural gas detection system (e.g., LEL) and appurtenant works for worker safety in the Florin Potable Water Storage Reservoir.

A10-17 (Cont.)

Fire Protection Services

Enhanced mitigation measures must be incorporated to reduce the level of risk to surrounding residents and Fire Department personnel.

While Applicant Proposed Measure 9 calls for the preparation of an Emergency Response Plan, the Draft EIR does not adequately address the impact of the project on emergency services, especially in an event involving numerous points of gas leaking from the ground and "pooling" inside structures. Two scenarios need to be addressed:

Concentrations inside a structure that are below the Lower Explosive Limit (L.E.L.) of natural gas. It would be expected that such leaks would be readily recognized because the olfactory sensitivity to mercaptan is much higher (i.e., concentration for recognition is lower) than the L.E.L. of natural gas. Emergency response to this situation would likely result in evacuations of residences, perhaps in a wide area of the storage field. The impact to emergency services and city social services would be significant. Current local emergency response plans and operating procedures are not specific to this situation. Plans and procedures will need to be further developed, refined, and implemented in cooperation with surrounding regional emergency service and health and safety providers.

Concentrations inside structures that lead to "vapor" explosions and resulting fires. If gas leaking from the reservoir occurs over a wide geographical area (i.e., multiple points), this scenario would have a significant impact on emergency services. In addition to firefighting and law enforcement impacts, there are significant costs associated with the city sheltering and feeding evacuees. Although the citywide Multiple Hazard Plan and the Hazardous Materials Incident Plan address those actions, procedures will need to be further developed, refined, and implemented in cooperation with surrounding regional emergency service and health and safety providers.

A10-18

Mitigation addressing these impacts should be included in the EIR. Mitigation could include, e.g.,

- City emergency response costs, including costs of departments and agencies providing assistance to the city for emergency responses shall be deposited or guaranteed in advance by SNGS in accordance with the Sacramento Hazardous Materials Emergency Response Ordinance.

- Costs of plan development, refinement, and implementation specific to this project shall be deposited or guaranteed in advance by SNGS. Planning and exercises may be required, at the City's discretion, to determine the plan's effectiveness. Development, refinement and implementation of the plan will involve other departments and agencies beyond the City of Sacramento. Sacramento Metropolitan Fire District, Cosumnes Community Services District (Fire), and West Sacramento Fire Department, Sacramento Police Department, Sacramento Sheriff's Department and Elk Grove Police are all responders to a large scale event in the project area.

A10-19

Impact HAZ 2B addresses potential release of natural gas and resulting in fire and explosion from the wellhead site, compressor station, and pipeline segments 1 and 2. In response to the impact noted on pages D.6-26 through D.6-32, the EIR should confirm that there are numerous single-family dwellings located within the 600-foot radiant heat footprint of the wellhead. These buildings are primarily of non-rated, wood-frame type construction and offer little resistance to radiant heat flux. In the event of a wellhead incident, multiple buildings could catch fire resulting in probable injuries to residents. Multiple simultaneous structure fires would significantly impact the available resources of local fire departments to respond to additional emergency requests, and this risk should be included in the impact discussion.

The following should be added to the mitigation measures listed in HAZ 2B*i* and HAZ 2B*ii* to mitigate the impact.

- A Service Gap Analysis shall be conducted at the applicant's expense by a well control specialist to identify and recommend additional fire and explosion protection including, but not limited to, infrastructure improvements (e.g., water). The analysis shall include an evaluation of equipment and training needed by first responders to meet the strategies outlined in the Emergency Action Plan. The applicant shall establish a funding mechanism to cover one-time and continuing costs related to training and equipment for departments identified as responsible for providing emergency services to an incident, and for the installation and maintenance of any infrastructure identified as needed by such study.

- SNGS shall be required to retain the services of a company recognized as proficient in Emergency Response Well Control for the purpose of controlling and suppressing incidents beyond the technical proficiency of local fire services. The company's capabilities and time of response are subject to approval by the fire department.

- Costs associated with the above required analysis, training, and equipment, shall be borne by SNGS. Training and equipment may be required of other departments and agencies beyond the City of Sacramento. Sacramento Metropolitan Fire District, Cosumnes Community Services District (Fire), and West Sacramento Fire Department are all responders to a large scale event in this area. In addition, training of law enforcement (Sacramento Police Department, Sacramento Sheriff's Department and Elk Grove Police) may be identified as needed within the analyses, and costs would be deposited or guaranteed in advance by SNGS.

- City costs for emergency response, including costs of other departments and agencies providing assistance to the city for emergency responses shall be deposited or guaranteed in advance by SNGS in accordance with the Sacramento Hazardous Materials Emergency Response Ordinance.

The fire department is concerned about public safety impacts which are identified in the report as "significant and unavoidable," even with mitigation measures implemented. Such impacts will clearly negatively affect the fire departments's ability to provide services as established levels throughout the city during such an event.

A10-20

Geology and Hazards: Faulting

The Draft EIR appropriately addresses faults capable of surface rupture but not address the potential presence of subsurface faults (also called "blind" faults) that could influence the project in two ways. First,

A10-21

such a fault could rupture at depth within the storage aquifer and jeopardize the integrity of the cap rock that contains the proposed gas storage area and could result in unanticipated leakage. Second, even if such a fault does not rupture during the life expectancy of the project, if it were present within the proposed storage area, it may represent a zone of reduced permeability along which unanticipated gas leakage into the surrounding groundwater and/or ground surface may occur. Page D.6-24 addresses gas migration relative to "preexisting faults" but does not adequately address the potential for blind faulting such as the Willows Fault Zone presently mapped on or near the site. The discussion of this impact should be included in the EIR.

A10-21 (Cont.)

Geology and Hazards: Geologic & Hydrogeologic Investigation & Analysis Requirements

Page D.6-33 identifies the need for additional geologic and hydrogeologic investigation and analysis (HAZ-2ai) Mitigation Measure HAZ-2ai provides that DOGGR will be responsible for approval of these investigations and analyses. While this may be appropriate for installation of wells and operations and maintenance, protection of the groundwater is within the jurisdiction of either Sacramento County Environmental Management Department (SCEMD) or the Sacramento Regional Water Quality Control Board (RWQCB). These agencies should be included in the review of any reports that make interpretations regarding the potential for gas migration into adjacent or superjacent groundwater aquifer or migration to the ground surface relative to public safety.

A10-22

Hazards: Influence of Drilling Fluids

Page D.7-21 indicates that drilling of wells will use non-toxic drilling fluids within the areas above the top of the aquifer (H-5b) and that an NPDES permit will be obtained for any surface trenching or Horizontal Directionally Drilled (HDD) holes (H-5c). In both cases, there is a potential for loss of drilling fluids under pressure into the surrounding groundwater aquifer and/or into surface waters such as "frac-out" during HDD drilling. The text should include a reference to Applicant Proposed Measure 16 (Bore Plan and Frac-Out Contingency Plan) and assess the effectiveness of the measure in reducing the risk of contamination to groundwater encountered during the drilling process.

A10-23

Geology and Hazards: California Accidental Release Prevention Program

City staff has been notified that the SNGS project will be subject to compliance with the California Accidental Release Prevention Program (CalARP). The CalARP Program merged the federal and state programs for the prevention of the accidental release of regulated toxic and flammable substances. The goal of the program is to eliminate the need for two separate and distinct chemical risk management programs.

The Draft EIR refers to the Sacramento County Environmental Management Department under the discussion on page D.6-11 regarding local regulations, but there was no mention in this section, nor in subsequent sections of the Draft EIR (such as in the Permits Required for the SNGS Facility chart on page A-6) that discussed the CalARP requirement. This information should be reflected in the final environmental document.

A10-24

If you have any questions regarding the CalARP Program, please contact Dennis Karidis at KaridisD@saccounty.net or 916-875-8458.

A10-24 (Cont.)

Climate Change: Greenhouse Gas Emissions

The Draft EIR utilizes consistency with the emissions reduction target and strategies prescribed in or developed to implement Assembly Bill 32, the Global Warming Solutions Act of 2006. (Page F-7) The City of Sacramento currently utilizes this approach, and also reviews the project to determine whether it is generally consistent with the growth and development assumptions utilized in the Master EIR for the 2030 General Plan, which included an extensive analysis of greenhouse gas emissions and contributions to global climate change.

The Draft EIR apparently concludes that the project is consistent with reduction targets and strategies, but proceeds to identify mitigation. While the applicant may not object to the mitigation identified in the text (see page F-10), the approach adopted is not consistent with the City's approach to impact analysis. In addition, we note that the Draft EIR refers to the project's contribution to global climate change as "minor." (Page F-9) Given the implicit conclusion that the project's contribution is cumulatively considerable, we recommend that the text be revised to delete the characterization as "minor."

A10-25

Noise

The noise analysis discusses noise that would be generated by the project, and identifies mitigation to ameliorate noise levels at sensitive receptors. (Page D.9-8, 9) While the discussion concludes the impact would remain significant and unavoidable, the discussion does not identify anticipated noise levels with mitigation. This is essential information for decision-makers and the public, and should be included.

City Code Section 8.68.060 would preclude operation of the well drilling equipment, and the project would, therefore, require a variance. A variance may be granted pursuant to City Code Section 8.68.260 if the code requirements would cause practical difficulties, unnecessary hardship or unreasonable expense. This entitlement requirement should be set forth here, and added to Table A-1.

A10-26

Transportation

The following relate to the City's transportation responsibilities:

1. Page B-21, B4.2.2 under the Wellhead Construction. "The site would be fenced with a masonry wall....) The applicant shall be required to provide a site plan with all proposed work subject to review of the City of Sacrament, Department of Transportation. All frontage improvements shall be required as part of approval with the project site plan at this location.

A10-27

2. Page B-22 under section B.4.2.4 Pipeline construction. All work within the public right of way shall be subject to review and approval by the City of Sacramento, Department of Transportation. Encroachment permits shall be required for any work to be done within the public right of way.

A10-28

3. Table B-5 page B-32 under bullet No 11, the traffic control plan shall be subject to review and approval of the City of Sacramento, Department of Transportation.

A10-29

4. Page D.12-5, under the title" City of Sacramento General Plan," all text and policies are references to the city's 1988 General Plan. Please note that the City of Sacramento has an approved 2030 General Plan. Please revise the text to reflect the 2030 General Plan policies. **A10-30**

5. For the proposed Wellhead along Power Inn Road, the project applicant shall be required to dedicate sufficient pedestrian easements and construct frontage improvements along Power Inn Road adjacent to the subject property. Frontage improvements shall include a 5-foot separated sidewalk, and a 6.5-foot planter with vertical curb and gutter. Additionally, the project applicant shall be required to construct ADA ramps at the corner of Power Inn Rd and Junipero Street per the City of Sacramento standards. Please contact Zarah Bringas at 808- 8494 for more details about required improvements. **A10-31**

6. Any obstructions such as fences and gates shall not be allowed within the public right of way of Junipero Street. **A10-32**

7. A site plan showing all proposed work on the Compressor Station Site, within the Army Depot, shall be subject to review by the City of Sacramento, Department of Transportation. **A10-33**

Biological Resources

On Page D.3-31 – the paragraph following "City of Sacramento Tree Preservation Ordinance" should be changed as follows: **A10-34**

> The City of Sacramento has adopted an ordinance (Sacramento City Code (SCC) 12.56 – Trees Generally and SCC 12.64 – Heritage Trees) to protect certain trees as significant resources to the community. ~~(Municipal Code 12.56.60.1) to protect trees as a significant resource of the community. It is the City of Sacramento's policy to retain trees when possible, regardless of their size.~~ It is the City of Sacramento's determination that the planting and preservation of trees enhances the beauty and health of the City, continues a historic identity as a "City of Trees", increases property value and promotes energy conservation. When circumstance will not allow for retention of existing trees, permits are required to remove trees that are protected under SCC 12.56 and SCC 12.64.~~within City of Sacramento jurisdiction.~~ Removal of, or construction around trees that are protected by the tree ordinance are subject to permission and inspection by ~~city arborists~~ the Urban Forestry Division. The City of Sacramento ~~Tree Services~~ Urban Forestry Division reviews project plans during the construction process to minimize impacts to trees along the streets of the city.

Project Description

The project description should include the following information: (1) a community garden is located in Danny Nunn Park and should be referenced; (2) the text should confirm that there are no building or use restrictions for properties, including parks, located above the proposed reservoir; and (3) the text should identify any staging areas, if any, outside the boundaries of the Army Depot and the proposed wellhead site, or confirm that no such staging areas will occur as part of the project. **A10-35**

If you have any questions regarding the information provided in this letter, please contact me at your convenience via email at tbuford@cityofsacramento.org or at (916) 808-7931.

A10-35 (Cont.)

Sincerely,

Tom Buford, Senior Planner

Cc: Cassandra Jennings, Assistant City Manager
Michael Sparks, Deputy City Attorney
David Kwong, Planning Director
Samar Hajeer, Department of Transportation
Robert Armijo, Department of Utilities
Tom Pace, Community Development Department
Dana Allen, Parks and Recreation
King Tunson, Fire Department

Document No. A11

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California State Senate

SENATOR
DARRELL STEINBERG
PRESIDENT PRO TEMPORE
SIXTH SENATE DISTRICT

RULES COMMITTEE
CHAIR

June 22, 2009

Timothy Alan Simon
Commissioner
California Public Utilities Commission
505 Van Ness Avenue, Room 5213
San Francisco, CA 94102

Richard Smith
Administrative Law Judge
California Public Utilities Commission
505 Van Ness Avenue, Room 5213
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Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, California 92024

Re: **Draft Environmental Impact Report for the Sacramento Natural Gas Storage Project, CPCN Application No. A.07-04-013 / SCH No. 2007112089**

Dear Commissioner Simon, Judge Smith, and Mr. Rosauer:

As you may be aware, the proposed Sacramento Natural Gas Storage Project (SNGS) is located in the Avondale-Glen Elder neighborhood, which I have been pleased to represent as their state Senator. I appreciate the opportunity to comment on the Draft Environmental Impact Report for SNGS and to express my concerns about the potential negative consequences the community may experience as a result of its construction. **A11-1**

In keeping with the California Environmental Quality Act, the project proponents are required to include all of the studies used to support their contention that the safety and security of the neighborhood will not be impacted by the project. In my opinion, the DEIR does not adequately illustrate that the underlying aquifer will be protected from migrating natural gas, nor are mitigation measures to prevent this occurrence adequately described. Further, fire safety and protection measures, also intended to protect public **A11-2** **A11-3**

health and safety, are incomplete and the standards and means by which these measures could be evaluated and approved by an appropriate authority are not clearly delineated. Finally, a thorough discussion of the criteria considered by the California Public Utilities Commission to determine whether an overriding public interest necessitates approval of the project is omitted from the DEIR.

A11-3 (Cont.)

A11-4

For these reasons, I respectfully urge that you take into account the attached memorandum, which explains in more detail my serious concerns about the impact SNGS will have on the Avondale-Glen Elder Neighborhood.

A11-5

Thank you for your consideration.

Sincerely,

DARRELL STEINBERG
Senate President pro Tempore
Senator, District 6

DS:kz

Attachment

MEMORANDUM

TO: Commissioner Timothy Alan Simon
Judge Richard Smith
Mr. Michael Rosauer

FROM: Senator Darrell Steinberg

DATE: June 22, 2009

SUBJECT: Sacramento Natural Gas Storage Project Draft Environmental Impact Report CPCN Application No. A.07-04-03 / SCH No. 2007112089

The Draft Environmental Impact Report ("DEIR") fails to serve its critical purpose as an information document and does not demonstrate that the potential environmental impacts associated with development of the proposed storage facility have been fully considered. A11-6

Moreover, granting a private company status as a public utility with the right to pursue eminent domain has many implications, including potential environmental impacts, and should not be undertaken lightly. Finally, through the California Public Utilities Commission ("Commission") proceeding and the California Environmental Quality Act ("CEQA") process, Sacramento Natural Gas Storage, LLC ("SNGS") has handled itself in ways that do not cast a favorable light on the company. A11-7

Requirement to Serve as an Informational Document

The Legislature mandated that DEIRs "be organized and written in a manner that will be meaningful and useful to decisionmakers and to the public." (Pub. Resources Code, § 21003, subd. (b).) The DEIR fails to include the information required to allow the public and the Commission to meaningfully evaluate the conclusions contained in the DEIR. A11-8

The DEIR is also inadequate because it improperly defers the development of critical mitigation measures thereby preventing the public and the Commission from meaningfully considering the adequacy of these measures.

A11-8 (Cont.)

"[H]ighly technical and specialized analysis and data [is not required] in the body of an EIR[.]" (Cal. Code of Regs., tit. 14, § 15147.) However, these documents must be included as "appendices to the main body of the EIR." (*Ibid.*) The appendices must be "readily available for public examination and shall be submitted to all clearinghouses which assist in public review." (*Ibid.*) The DEIR relies on numerous reports and studies that were prepared for the Proposed Project. Despite its reliance on these documents to reach the conclusions contained in the DEIR, the appendices only includes two documents: Air Quality Data and System Safety and Risk of Upset. (See DEIR, Apps. A-B.) Other studies produced for the Proposed Project that the DEIR relies on include, but are not limited to, the following:

1) PBS&J. 2006. Reconnaissance-level special-status species surveys. Prepared for SNGS, LLC.
2) PBS&J. 2007a. Reconnaissance-level field surveys. Sacramento, California: PBS&J. Prepared for SNGS, LLC.
3) PBS&J. 2007b. Pipeline alignment field survey. Sacramento, California: PBS&J. Prepared for SNGS, LLC.
4) Sycamore Environmental Consultants, Inc. 2008. Preliminary Jurisdictional Delineation Report for Sacramento Natural Gas Storage Project, Sacramento CA. Sacramento, California: Sycamore Environmental Consultants.
5) Tremaine and Associates. 2008. Cultural Resources Inventory for the Sacramento Natural Gas Storage (SNGS) Project, City of Sacramento, California.
6) Mannon, R. 2008. Letter to Mr. James Fossum, SNGS, LLC. Mannon Associates Petroleum Consultants.
7) Mannon Associates. 2008. Analysis of the Florin Gas Field for Gas Storage. Sacramento, California: Prepared by Mannon Associates for SNGS, LLC.
8) Ryder Scott Company. 2008. Letter providing results on injection and production cycles. Dated June 30, 2008.
9) Scott, R. 2008. Letter to Mr. James Fossum, SNGS, LLC. Ryder Scott Company Petroleum Consultants. Dated March 4, 2008.
10) Ryder Scott Company. 2008. Letter to Mr. Jim Fossum, SNGS, LLC. Dated May 16, 2008.
11) Golder Associates. 2008. Evaluation of Cap Rock Integrity and Risk of Gas Release. Redmond, Washington: Golder Associates. Prepared for SNGS, LLC.

A11-9

12) Matthews, John F. 2006. Consulting Engineers, Letter to Mr. Jim Fossum, Florin Gas Storage.
13) Terracon. 2008. Geotechnical Engineering Report, Sacramento Natural Gas Compressor Facility and Wellhead Site. Sacramento, California: Terracon.
14) Weatherwax, R.K. 2008. Probabilistic Risk Assessment, Sacramento Natural Gas Storage Project. Roseville, California: Sierra Energy and Risk Assessment, Inc.
15) Weatherwax R.K., and M.R. Weatherwax. 2007. California Natural Gas Storage Facilities: A Contemporary History of Incidents. Roseville, California: Sierra Energy and Risk Assessment, Inc.

A11-9 (Cont.)

Many of the above listed studies and reports were cited in the DEIR as part of the basis for conclusions reached in the analysis of health and safety impacts of the Proposed Project. As the Proposed Project involves the storage of billions of cubic feet of natural gas below a residential neighborhood in South Sacramento, health and safety issues go to the very heart of many of the areas of controversy acknowledged in DEIR. (DEIR, p. ES-8.) The adequacy of the DEIR's conclusions, and in particular the health and safety analysis, cannot be evaluated by the public, interested agencies, or the Commission because the appendices fail to include the supporting information and analysis upon which the conclusions are based. (Cal. Code of Regs., tit. 14, § 15147.) An updated DEIR with complete appendices must, therefore, be recirculated and resubmitted to all relevant clearinghouses.

A11-10

Just as many of the documents relied on in the DEIR are not included in the report, many of the mitigation measures proposed in the DEIR require the development of deferred plans. Many of these plans, once again, relate to impacts associated with health and safety concerns. For example, the DEIR requires SNGS to develop a:

1) Gas Detection Plan;
2) Bore and Frac-Out Plan;
3) Fire Protection Plan; and
4) Emergency Response Plan.

A11-11

By failing to describe these plans in the DEIR, the public and Commission cannot determine the feasibility and adequacy of these mitigation measures. For instance, the Fire Protection Plan and Emergency Response Plan both must be approved by City of Sacramento Fire Department ("SFD") and require SNGS to pay the cost of preparing for and responding to any accidents caused by the facility. Both measures require approval of SFD to demonstrate effectiveness of the measures despite the fact that the DEIR acknowledges that "SFD does not have adequate training for the types of emergencies that could occur at the facility, nor do they have a way to maintain any such training within the department at this time." (DEIR, p. D.11-11.) Without this knowledge, SFD's ability to approve a plan that is adequate mitigation is questionable. This issue is further

exacerbated by the fact that the DEIR provides that SNGS may commence construction prior to development and approval of the Fire Protection Plan. (DEIR, p. D.6-39 (Mitigation Measure HAZ-6) [the plan must be approved by SFD "*during* the construction of the facilities"].) Therefore, without including detailed plans for the public, interested agencies, and the Commission to review during the CEQA process, these mitigation measures are inadequate.

A11-11 (Cont.)

Additionally, the Gas Detection Plan is equally inadequate and illustrates a further flaw with the deferred mitigation plans included in the DEIR. The Gas Detection Plan requires qualified petroleum industry and groundwater experts to determine the proper "number, location, depth, screened interval, and instrumentation of [] deep aquifer monitor wells" that are required "at key points within the area over the Florin Gas Field." (DEIR, p. D.6-33 (Mitigation Measure HAZ-2aii).) The DEIR provides no further analysis or discussion of these monitoring wells. "An EIR is required to discuss the impacts of mitigation measures." (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 130.) The DEIR fails to analyze the potential environmental impacts associated with these additional wells or any other undisclosed potential environmental impacts related to the other deferred mitigation plans.

A11-12

The deferred Gas Detection Plan mitigation measure is also insufficient because it fails to include specific performance standards that demonstrate implementation of the measure will actually reduce the potential health and safety impacts of the project. The measure merely provides that "[i]f 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." (DEIR, p. D.6-34 (Mitigation Measure HAZ-2aii).) The DEIR and measure provide no assurances or details to suggest that a reservoir leak could in fact be "correct[ed]."

Therefore, the DEIR must be recirculated to both include the project specific studies and reports it relies on as part of the appendices and to further define, explain, and evaluate proposed mitigation measures. Until the DEIR includes this additional information, the DEIR is significantly deficient because it does not include the information necessary to allow the public, interested agencies, or the Commission to fully evaluate the potential environmental impacts associated with the Proposed Project.

A11-13

Need and Objectives

In order for the Commission to issue a Certificate of Public Convenience and Necessity ("CPCN"), the Legislature has required that the Commission determine that the proposed project is in fact needed. (Cal. Pub. Util. Code, §§ 1001-1002; see also Administrative Law Judge Richard Smith's Scoping Memo and Ruling in this Proceeding (July 25, 2008), p. 22 ("Scoping Ruling") ["The Commission must address this issue [of need]

A11-14

pursuant to §§ 1001 and 1002, and develop a record to determine whether or not there is evidence to support a finding of overriding consideration, if necessary, with respect to the final EIR."].) The goals and objectives discussed and analyzed in the DEIR must be formulated to reflect the legislative mandates regarding the issuances of CPCNs. A discussion of these mandates is missing from the DEIR. Rather than developing project objectives based on these legislative mandates, the DEIR simply adopts the goals and objectives of the Proposed Project "as established by SNGS, LLC." (See, e.g., DEIR, p. ES-26.) The Public Utilities Code and the CEQA demands a higher standard. Reliance on a proponent's declared objectives, absent independent lead agency review of the merits of these objectives and discussion of its conclusions within the DEIR, is not sufficient.

A11-14 (Cont.)

Only one sentence in the DEIR addresses the issue of the need for the Proposed Project; the DEIR states that "SMUD has identified a need for at least a 30-day backup supply of natural gas in the event of an outage of the PG&E natural gas distribution system." (DEIR, p. ES-22.) The DEIR fails to discuss the likelihood of such a disruption. The DEIR also fails to discuss the probability, in the event of a disruption, that it would last up to 30-days. As storage size is discussed throughout the DEIR as one of the key issues relating to the feasibility of the alternative storage locations discussed in the report, consideration of the probable length of future disruption is critical to accurately understand how reservoir size relates to feasibility of alternatives.

A11-15

Moreover, in 2008, in recognition of the environmental impacts associated with the storage of natural gas, including the global warming impacts, the California Public Utilities Commission and the California Energy Commission declared that "California needs to consider means by which natural gas usage can be minimized . . . while still meeting California's overall energy needs." (The 2008 Energy Action Plan Update acknowledges that methane has 23 times the global warming potential of carbon dioxide in the atmosphere. Cal. Energy Com. & Cal. Pub. Util. Com., 2008 Energy Action Plan Update, Feb. 2008, pp. 17-18, at http://www.energy.ca.gov/2008publications/CEC-100-2008-001/CEC-100-2008-001.PDF (last visited June 2, 2009).) The 2008 Energy Plan Update, thus, acknowledges that "*next steps*" should include "[e]xamining the need for development of additional storage and pipeline infrastructure."(*Id.* at p. 18, table 6 (emphasis added).)

A11-16

The DEIR explains that outside of the CEQA process the Commission "may separately and specifically evaluate the need for the project." (DEIR, p. C-5.) Given the Legislative mandate that the Commission consider need, the Commission's own acknowledgement that need for these facilities must be further analyzed, and the fact that need is such a critical factor relevant to the consideration of the feasibility of alternatives to the Proposed Project, the DEIR cannot simply defer consideration of need. While this analysis is conspicuously missing from the DEIR, the DEIR relies on *assumed* need to cast doubt on the feasibility of the "No Project" alternative. For example, the DEIR

A11-17

asserts that if "No Project" alternative were chosen it could "potentially affect[] population growth and housing in the Sacramento metropolitan area" and "potentially result[] in significant impacts to utilities and public service systems in the Sacramento metropolitan area." (DEIR, pp. D.10-13, D.11-18.) Without a discussion of need, the DEIR cannot adequately and accurately hypothesize potential impacts if the Proposed Project were not developed.

A11-17 (Cont.)

Ground Water Impacts

The DEIR concludes that development of the Proposed Project (1) would result in some risk of gas migration into an aquifer above the storage reservoir, (2) if such gas migration occurred, "contamination could be substantial requiring a prolonged period of remediation," (3) that the contamination would "impact[] the water quality of a *major potable aquifer*," and (4) as a result, the DEIR concludes that the project would result in a significant and unavoidable impact to groundwater quality. (DEIR, p. D.7-23 (emphasis added).) The DEIR should have provided a detailed discussion concerning this aquifer, including the quantity of water extracted from it, number of people that rely on it, as well as the potential extent of contamination in the event of an accident. Without this information, the public and the Commission cannot fully understand the potential magnitude of this significant and unavoidable impact.

A11-18

Additionally, as noted previously, the 2008 Energy Action Plan Updated concluded that the need for gas storage requires further examination. On the other hand, the need and importance of this State's groundwater supplies is clear. "Water in California is a scarce and precious resource." (Governor's veto message to Sen. on Sen. Bill No. 1640 (2005-2006 Reg. Sess.) Sen. Daily File (Sept. 30, 2006), available at http://gov.ca.gov/pdf/press/ sb_1640_veto.pdf (last visited June 2, 2009).) The United States Geologic Survey has even declared that "[g]round water . . . is one of the Nation's most important natural resources." (USGS, Water Q&A, at http://ga.water.usgs.gov/edu/ qausage.html (last visited June 2, 2009).)

To approve the Proposed Project, the Commission would need to adopt a statement of overriding considerations setting forth the specific reasons why the agency finds the project's "benefits" render "acceptable" its "unavoidable adverse environmental effects." (CEQA Guidelines, §§ 15093, 15043, subd. (b); see also Pub. Resources Code, § 21081, subd. (b).) The California Legislature has declared that "a principal goal of electric and natural gas utilities' resource planning and investment shall be to *minimize the cost to society* of the reliable energy services that are provided by natural gas and electricity, *and to improve the environment*[.]" (Cal. Pub. Util. Code, § 701.1, subd. (a) (emphasis added).) Impacts to one of the most precious resources – groundwater aquifers – are an extreme potential cost. Considering the unquestionable importance of California's groundwater supplies and the 2008 Energy Plan Update's declaration that the need for future gas storage facilities must be further evaluated, the analysis in the DEIR is simply

A11-19

not adequate to allow the Commission to draft a statement of overriding considerations that would comply with the requirements of CEQA.

A11-19 (Cont.)

Adequacy of Alternatives Analysis

The 2008 Energy Plan Update suggests potential alternatives that could replace the need for future gas storage facilities. These alternatives include increasing the use of certain biofuels, such as methane from cattle farms. (2008 Energy Action Plan Update, p. 18.) Unlike the Proposed Project, these types of biofuel projects may actually reduce air quality and water quality impacts associated with both California's agricultural and energy sectors. Moreover, a conservation alternative may not only reduce the need for gas storage, but could also contribute to a moderation of natural gas price. (*Ibid.*) The DEIR fails to consider either of these alternatives. The DEIR also fails to provide a detailed level of analysis of alternative storage locations that may potentially have less significant groundwater quality impacts than the Proposed Project. The alternatives analysis must be updated to include these additional alternatives and to provide a similar level of analysis for the potentially feasible alternatives already considered in the report.

A11-20

The DEIR alternative analysis also relies on information submitted by SNGS to provide inappropriate cost estimates associated with each of the alternative storage locations discussed in the DEIR. (DEIR, pp. E-20-E-21.) The Legislature has mandated that "[i]n calculating the cost effectiveness of energy resources . . . the commission shall include . . . a value for any costs and benefits to the environment, including air quality." (Cal. Pub. Util. Code, § 701.1, subd. (c).) The DEIR concludes that "[t]he Proposed Project is not considered environmentally preferable due to the potential consequences of release of natural gas within an area containing a substantial population." (DEIR, p. ES-27.) Moreover, the DEIR concludes that the Proposed Project ranks below every other potential reservoir location included in the DEIR "in terms of environmental impacts." (DEIR, p. E-20.) It is, thus, inappropriate for the DEIR to include or for the Commission to consider the raw cost calculations submitted by SNGS in evaluating the feasibility of alternatives. To evaluate the feasibility of each of the alternatives, and the feasibility of the Proposed Project itself, the DEIR should determine the costs of associated environmental impacts and incorporate these calculations into the Economic Considerations section of the alternatives analysis.

A11-21

Piecemealing and SNGS Representations

The evidence suggests that SNGS failed to provide an accurate description of the Proposed Project when it submitted its application for a CPCN to the Commission. CEQA defines "project" to mean "the whole of an action" that may result in either a direct or reasonably foreseeable indirect physical change in the environment. (Cal. Code of Regs., tit. 14, § 15378, subd. (a).) The inadequate Project Description has resulted in

A11-22

potential piecemeal review of the Proposed Project because significant foreseeable aspects of the Proposed Project are not analyzed in the DEIR.

A11-22 (Cont.)

For instance, a lease is a project subject to CEQA. (Pub. Resources Code, § 21065, subd. (c).) SNGS proposes to lease the use of pipelines owned by the Sacramento Municipal Utility District ("SMUD") to deliver gas stored by the Proposed Project. The DEIR should, therefore, consider use of these pipelines within the risk assessment analysis. If the Proposed Project will not increase the overall quantity of gas in these pipelines, but rather will replace other gas, the DEIR should discuss any potential impacts associated with the displacement of gas. Moreover, as SMUD is a publicly owned utility and its pipelines are not subject to all the same regulations as those owned by SNGS, the DEIR should consider whether these issues would have the potential to result in any additional environmental impacts.

A11-23

Additionally, providing SNGS with the power to pursue the use of eminent domain has foreseeable environmental impacts that must be analyzed. SNGS's claim that it does not plan to utilize eminent domain as part of the Proposed Project appears suspect at best. SNGS sponsored Senate Bill 814 (Ashburn) during the current legislative session. Senate Bill 814, if adopted into law, would amend the Public Utilities Code to reduce the length of time required before a public utility may utilize property during the pendency of an eminent domain action. If SNGS did not plan on exercising its right to use eminent domain once it was granted a CPCN, it would not be involved in this piece of legislation.

Not only do SNGS's actions suggest that it plans to use eminent domain, but several aspects of the Proposed Project may involve the use of eminent domain. [1] As discussed previously, the Gas Detection Plan requires the development of an undisclosed number of monitoring wells at an undisclosed number of "key points." (DEIR, p. D.6-33 (Mitigation Measure HAZ-2aii.) It is foreseeable that at least some of these wells will need to be built on privately owned land, and that SNGS may pursue the use of eminent domain to construct the wells.

A11-24

SNGS may also seek the right to utilize eminent domain to directly connect other potential customers to the Proposed Project. (See Reply Testimony of Jim Fossum, p. 5 [acknowledging that other potential customers may "want a direct connect[ion] . . . to the compressor station"].) As SNGS acknowledges the potential for direct connection, this is a foreseeable future impact of the Proposed Project and must be analyzed in the DEIR. Since SMUD will only utilize up to half of the Proposed Project's capacity, approximately four billion cubic feet of storage capacity will remain available to other potential customers. The DEIR should discuss all potential impacts related to this

[1] One method to address environmental impacts associated with the potential use of eminent domain in connection with the Propose Project would be to include a mitigation measure that prohibits the use to eminent domain by SNGS.

additional storage capacity including consideration of likely users and uses for stored gas to evaluate foreseeable indirect impacts related to the Proposed Project. [2]

A11-24 (Cont.)

Finally, SNGS not only failed to fully disclose the scope of the Proposed Project to the Commission, but SNGS has also been less than forthcoming to the community that would be impacted by the Proposed Project. In late 2007, SNGS sent a flier to community members claiming that "[r]espected Sacramento Fire and Safety Officials testified ... that the project is safe." (See Exhibit A, 2007 SNGS Flyer.) I understand that the City of Sacramento determined that SNGS's claim was false and demanded that SNGS stop distributing that statement in its flier. On July 25, 2008, in the Scoping Ruling, Administrative Law Judge Richard Smith stated "that [SNGS] should not make representations suggesting that it has eminent domain authority which it does not possess." (Scoping Ruling, p. 26.) Despite the Judge's warning, SNGS's website still includes a "Community Questions" document that states: "If a signature is refused, our alternative *will be* to commence an action in eminent domain as to any such parcel." (SNGS, Community Questions, http://www.sacnaturalgas.com/images/Community%20Questions%20&%20Answers.pdf (last visited June 10, 2008) (emphasis added).)

A11-25

Most recently, prior to the CEQA Public Hearing on the Proposed Project held by the CPUC on April 28, 2009, SNGS mailed a flier to the community that stated, in bold font, "**bring this flier with you to the meeting to get through the security gate.**" (See Exhibit B, 2009 SNGS flyer (emphasis in original).) At the meeting, CPUC Commissioner Simon expressed concern that SNGS's flier implied that community members would have to display the flier at the guarded security gate in order to gain access to the public meeting. (See Transcript of the April 28, 2009 Public Participation Hearing held by the Public Utilities Commission, p. 298.) I echo the Commissioner's concern. A CEQA public meeting must be open to the public and provide all interested citizens with an opportunity to comment on the DEIR. SNGS's actions jeopardized the legal adequacy of the meeting. These types of actions reflect poorly on SNGS and suggest that it may not be qualified to become a public utility.

A11-26

Conclusion

The CEQA process was established by the Legislature with the goal to "protect[] not only the environment but also informed self-government." (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564, quoting *Laurel Heights Improvement*

A11-27

[2] The DEIR also fails to consider the foreseeable indirect impacts associated with SMUD's use of the Propose Project to store natural gas. Use of this gas to produce energy will result in environmental impacts. Moreover, the availability of additional gas supplies from stored gas may result in SMUD relying more heavily on natural gas as opposed to other alternative energy sources.

A11-28

Association v. Regents of the University of California (1988) 47 Cal.3d 376, 392.) The DEIR falls short of complying with either of these goals. To remedy the flaws in the DEIR, the Commission will need to add substantial and significant new information to the report. As a result, the Commission should recirculate the DEIR once the report has been updated to include the information necessary to comply with CEQA. (Pub. Resources Code, § 21092.1; Cal. Code of Regs., tit. 14, § 15088.5, subd. (a)(4).) I look forward to reviewing an updated draft of the DEIR. Thank you for the opportunity to comment on this version.

A11-27 (Cont.)

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

June 22, 2009

Michael Rosauer
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Subject: Sacramento Natural Gas Storage Project, CPCN Application No. 07-04-013
SCH#: 2007112089

Dear Michael Rosauer:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on June 18, 2009, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

A12-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2007112089
Project Title Sacramento Natural Gas Storage Project, CPCN Application No. 07-04-013
Lead Agency Public Utilities Commission

Type EIR Draft EIR

Description NOTE: Extended review for another 45-day period starting 5-5-09.

Sacramento Natural Gas Storage, LLC is proposing the construction of an underground natural gas storage in the depleted Florin Gas filed within portions of the City of Sacramento and an unincorporated portion of Sacramento County. The proposed project will include the storage of up to 7 billion cubic feet of natural gas within the deleted gas field reservoir at one time. The proposed project will include the drilling of up to 5 natural gas injection wells, construction of a compressor station and approximately 1 mile of high-pressure gas transmission line.

Lead Agency Contact

Name Michael Rosauer
Agency California Public Utilities Commission
Phone (415) 703-2579 **Fax**
email
Address 505 Van Ness Avenue, 4th Floor
City San Francisco **State** CA **Zip** 94102

Project Location

County Sacramento
City Sacramento
Region
Lat / Long
Cross Streets Power Inn Road, Fruitridge Road, Junipero Street, Elder Creek Road
Parcel No. multiple
Township multi **Range** multi **Section** multi **Base** multi

Proximity to:

Highways I-5, SR 99, SR 50
Airports Sacramento Executive
Railways Union Pacific
Waterways Morrison Creek
Schools Elder Creek ES,Camelia ES, Earl Warren ES, Samuel Kennedy Es
Land Use Local Business/Commercial/Residential/Industrial

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 2; Office of Historic Preservation; Department of Parks and Recreation; Central Valley Flood Protection Board; California Highway Patrol; Caltrans, District 3; Caltrans, Division of Transportation Planning; Air Resources Board, Major Industrial Projects; Integrated Waste Management Board; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 04/06/2009 **Start of Review** 04/06/2009 **End of Review** 06/18/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

A12-1 (Cont.)

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. LL40
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

April 8, 2009

Clear 5-21-09 e 6-18-09

Michael Rosauer
California Public Utilities Commission
c/o Dudek
605 Third Street
Encinitas, CA 92024

State Clearinghouse (SCH) Number: 2007112089
Sacramento Natural Gas Storage Project

Staff for the Department of Water Resources has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2).

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee(CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);

A12-2

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

Sincerely,

James Herota

James Herota
Staff Environmental Scientist
Floodway Protection Section
Division of Flood Management

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

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STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

June 23, 2009

Michael Rosauer
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Subject: Sacramento Natural Gas Storage Project, CPCN Application No. 07-04-013
SCH#: 2007112089

Dear Michael Rosauer:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on June 18, 2009. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

A13-1

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2007112089) when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region

Karl E. Longley, ScD, P.E., Chair

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Arnold Schwarzenegger
Governor

22 June 2009

Cher
6·18·09
l-fe
e

Michael Rosauer
CPUC Project Manager
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT, SACRAMENTO NATURAL GAS STORAGE PROJECT, SACRAMENTO COUNTY, SCH #2007112089

We have reviewed the April 2009 *Draft Environmental Impact Report* (DEIR) for the proposed Sacramento Natural Gas Storage Project in Sacramento County. Our review focuses on water quality aspects of the project provided in Sections D.6 and D.7 of the DEIR.

Section D.7 of the DEIR discusses hydrology and water quality. For Impact H-8, the DEIR states that natural gas can enter the groundwater aquifer through faults or discontinuities in the cap rock, or through abandoned or operating wells that are not properly sealed. The DIER also states that there is sufficient evidence to conclude that the leakage of gas into the overlying groundwater aquifer is unlikely to occur. It also states that if leakage occurs, that there could be substantial impacts to the aquifer.

Mitigation measures include H-8b to install groundwater monitoring wells in the aquifer above the gas field, obtain baseline samples prior to any drilling activities, and to monitor the wells. If hydrocarbon levels increase above baseline, gas storage activities would be suspended and the reservoir would be allowed to depressurize until the source is found and corrected. The DEIR also states that groundwater remediation may be necessary. A13-2

We have the following comments that should be addressed in the Final EIR:

1) The Final EIR should identify the protocols that were used for abandoning the old gas wells and whether they were intended to allow future use of the formation for storage of natural gas up to the proposed 8% above the original gas fields.

2) The Final EIR should identify approximately how many groundwater monitoring wells will be installed, where they might be screened to detect impacts from below the aquifer, how often they will be monitored, and who will review and interpret the data.

3) The Final EIR should identify approximately how many baseline groundwater samples will be collected and over what time period, whether the baseline values will be statistically-based, what criteria will be used to verify an exceedance over the baseline values, and what parameters will be monitored. Given that natural gas consists of methane, it is not clear what

the characteristics and potential severity of the water quality impacts might be from a release of natural gas into the groundwater aquifer.

4) The Final EIR should identify what mechanism will be used to enforce the suspension of storage activities and depressurization of the field if a release occurs, how long the depressurization will take, how the leak might be located and corrected given that the formation will be depressurized, and which agency will oversee groundwater remediation.

A13-2 (Cont.)

Thank you in advance for considering our comments. If you have any questions, please call me at (916) 464-4622.

WILLIAM BRATTAIN, P.E.
Water Resources Control Engineer
Title 27 Permitting and Mining

cc: State Clearinghouse, Sacramento

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