

G. MITIGATION MONITORING AND REPORTING

This Environmental Impact Report (EIR) includes a mitigation monitoring, compliance, and reporting program (MMCRP) for the mitigation measures proposed for the project. An MMCRP table for the Proposed Project and its alternatives is provided at the end of each issue area in Section D (Sections D.2 through D.13) and lists each mitigation measure and outlines procedures for successful implementation. Section G provides the recommended framework for effective implementation of the MMCRP by the CEQA lead agency, the California Public Utilities Commission (CPUC), and describes the roles of responsible parties in carrying out and enforcing adopted mitigation measures.

G.1 Authority for the Mitigation Monitoring, Compliance, and Reporting Program

The California Public Utilities Code confers authority upon the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is the standard practice of the CPUC, pursuant to its statutory responsibility to protect the environment, to require that mitigation measures stipulated as conditions of approval be implemented properly, monitored, and reported on. In 1989, this requirement was codified statewide as Section 21081.6 of the California Public Resources Code (PRC) (California Environmental Quality Act (CEQA)). Section 21081.6 requires a public agency to adopt an MMCRP when it approves a project that is subject to preparation of an EIR and where the EIR for the project identifies significant adverse environmental effects. CEQA Guidelines Section 15097 (14 CCR 15000 et seq.) was added in 1999 to further clarify agency requirements for mitigation monitoring or reporting.

The purpose of an MMCRP is to ensure that measures adopted to mitigate or avoid significant impacts of a project are implemented. The CPUC views the MMCRP as a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CPUC and any monitors it may designate.

The CPUC will address its responsibility under PRC 21081.6 when it takes action on SNGS, LLC's application for a Certificate of Public Convenience and Necessity. If the CPUC approves the application, it will also adopt an MMCRP that includes the mitigation measures ultimately made a condition of approval by the CPUC.

G.2 Organization of the Final Mitigation Monitoring Program

If the project or an alternative to the project is approved, the MMCRP should serve as a self-contained general reference for the mitigation monitoring program adopted by the CPUC for the

SNGS project. To accomplish this, the final mitigation monitoring program (final plan) should contain seven elements (indicated below). If and when a project has been approved by the CPUC, they will compile the final plan from the mitigation monitoring program in the final EIR, as adopted. The elements of the mitigation monitoring program are as follows:

MMCRP Introduction

- Authority and purpose of the program
- Program adoption process
- Organization of the MMCRP.

Roles and Responsibilities

- Monitoring responsibility
- Enforcement responsibility
- Mitigation compliance responsibility
- Dispute resolution.

General Monitoring Procedures

- Environmental monitor
- Construction personnel
- General reporting requirements
- Public access to records.

Project Description

In the final plan, this section will contain a concise overview and reference description of the approved project and will clearly outline its physical locations and timetable, including construction segments. This section will also specify the “master” reference(s), which the monitors and the applicant will use in carrying out the program (e.g., the final EIR, but also more detailed working maps and plans). The applicant proposed measures (APMs) to which SNGS, LLC has committed to reduce potential impacts will also be listed in this section.

Agency Jurisdictions

In the final plan, this section will include the list of agencies with jurisdiction over the project (from EIR Table A-1) and a description of where their respective jurisdictions exist. For example, for a given construction segment, each jurisdictional agency’s contact person’s information (including name, address, telephone and fax numbers) should be provided.

Mitigation Monitoring Programs

The final plan will incorporate the organization and display of the individual issue area mitigation monitoring programs presented in the final EIR, as well as all APMs applicable to the project. Each mitigation measure will be numbered and described briefly. The final EIR should be consulted for an in-depth discussion of each mitigation measure. The final plan will also include:

- The responsible parties, schedule, and reporting requirements for carrying out the monitoring activity for each mitigation measure
- Effectiveness criteria for evaluating the implementation of the mitigation measure.

G.3 Roles and Responsibilities

As the lead agency under CEQA, the CPUC is required to monitor this project to ensure that the required mitigation measures and APMs are implemented. The CPUC will be responsible for ensuring full compliance with the provisions of this monitoring program and has primary responsibility for implementation of the monitoring program. The purpose of the monitoring program is to document that the mitigation measures required by the CPUC are implemented and that that mitigated environmental impacts are reduced to the level identified in the program.

The CPUC may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies (such as affected jurisdictions and cities). The number of construction monitors assigned to the project will depend on the number of concurrent construction activities and their locations. However, the CPUC will ensure that each person delegated monitoring duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires approval from the CPUC must allow for adequate review time, as stipulated in the mitigation monitoring tables at the end of each impact area section. Other agencies and jurisdictions may require longer review periods. It is the responsibility of the environmental monitors assigned to the project to ensure that appropriate agency reviews and approvals are obtained.

The CPUC and its environmental monitors will also ensure that any variance process or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no project variance will be approved by the CPUC if it creates new significant impacts. As defined in this section, a variance should be strictly limited to minor project changes that will not trigger other permit requirements, that do not increase the severity of an impact or create a new impact, and that clearly and strictly comply with the intent of the mitigation

measure. A Proposed Project change that has the potential for creating significant environmental effects will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved project, adopted mitigation measures, and APMs, and correction of such deviation, shall be reported immediately to the CPUC and the environmental monitors assigned to the project for their review and approval. In some cases, a variance may also require approval by a CEQA-responsible agency.

G.4 Enforcement Responsibility

The CPUC is responsible for enforcing the procedures adopted for monitoring through the environmental monitors assigned to the project. The environmental monitors shall note problems in the field, notify appropriate agencies or individuals about issues, and report compliance status to the CPUC Project Manager.

The CPUC has the authority to halt any construction, operation, or maintenance activity associated with the SNGS project if the activity is determined to be a deviation from the approved project, adopted mitigation measures, or APMs. The CPUC may delegate this authority to third-party environmental monitors assigned to the project.

G.5 Mitigation Compliance Responsibility

The applicant, SNGS, LLC, is responsible for successfully implementing all the adopted mitigation measures in the MMCRP. The MMCRP will contain criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include requirements such as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include success criteria that are listed in the mitigation monitoring tables at the end of each impact area section. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

The applicant shall inform the CPUC and its monitors in writing of any mitigation measures that are not or cannot be successfully implemented. In coordination with its monitors, the CPUC will assess whether alternative mitigation is appropriate and specify to SNGS, LLC when subsequent actions are necessary to protect resources consistent with the findings of the EIR.

G.6 Dispute Resolution

It is expected that the final MMCRP will reduce or eliminate many potential disputes. However, even with the best preparation, disputes may occur. In such event, the following procedures will be followed:

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC's designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- **Step 2.** Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the Proposed Project or adopted mitigation monitoring program.
- **Step 3.** If a dispute or complaint regarding the implementation or evaluation of the program or the mitigation measures cannot be resolved informally or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written "notice of dispute" with the CPUC's Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an executive resolution describing his/her decision and serve it on the filer and other affected participants.
- **Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the Resolution, such party/parties may appeal it to the CPUC via a procedure to be specified by the CPUC.

Parties may also seek review by the CPUC through existing procedures specified in the CPUC's rules of practice and procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedures.

G.7 General Monitoring Procedures

G.7.1 Environmental Monitors

Many of the monitoring procedures will be conducted during the construction phase of the project. The CPUC and the environmental monitors are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with SNGS, LLC. To oversee the monitoring procedures and to ensure success, the environmental monitors assigned to the project must be on site during construction activities that have the greatest potential to create a significant environmental impact or other impact for which mitigation is required. The

environmental monitors are responsible for ensuring that all procedures specified in the monitoring program are followed.

G.7.2 Construction Personnel

A key component of a successful mitigation monitoring program will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures included in the final plan, will be taken:

- Procedures to be followed by construction companies hired to do the work will be written into contracts between SNGS, LLC and any construction contractors. Procedures to be followed by construction crews will be written into a separate agreement that all construction personnel will be asked to sign, denoting agreement.
- One or more preconstruction meetings will be held to inform and train construction personnel about the requirements of the monitoring program (as detailed in the final plan).
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all mitigation measures requiring their attention.

G.7.3 General Reporting Procedures

Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitors assigned to the relevant construction segment. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress traced by the environmental monitors. A checklist will be developed and maintained by the environmental monitors to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitors will note any issues that may occur and take appropriate measures to bring a situation back into compliance. The applicant shall provide the CPUC with written weekly reports of the project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the project. Weekly reports shall be required as long as mitigation measures are applicable.

G.7.4 Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CPUC on

request. The CPUC and the applicant will develop a filing and tracking system. For additional information on mitigation monitoring and reporting for the SNGS project, the Energy Division of the CPUC will maintain an Internet website, accessible at http://www.cpuc.ca.gov/environment/info/dudek/sngs/SNGS_Home.htm. In order to facilitate the public's awareness, the CPUC will make weekly reports available on the website.

G.8 Condition Effectiveness Review

In order to fulfill its statutory mandates to mitigate or avoid significant effects on the environment and to design a mitigation monitoring program to ensure compliance during project implementation (PRC 21081.6):

- The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the dispute resolution procedure outlined in G.3.4.
- If in either review, the CPUC determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, then the CPUC may impose additional reasonable conditions to effectively mitigate these impacts.

These reviews will be conducted in a manner consistent with the CPUC's rules and practices.

G.9 Mitigation Monitoring Program Table

Table G-1, along with the full text of the mitigation measures themselves, will form the basis for implementation of the mitigation monitoring program.

**Table G-1
Mitigation Monitoring Program**

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
A-2	NO _x emissions during construction will exceed the <u>Sacramento Metropolitan Air Quality Management District (SMAQMD)</u> daily emissions threshold of 85 lbs/day.	—	3	<p>(a) The Proposed Project shall provide a plan for approval by the lead agency and the SMAQMD demonstrating that the heavy-duty (>50 hp) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, would achieve a project-wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent CARB fleet average at time of construction. The SMAQMD shall make the final decision on the emission-control technologies to be used by the project construction equipment; however, 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.</p> <p>(b) The project applicant and/or contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment equal to or greater than 50 hp that will be used an aggregate of 40 or more hours during any phase 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 applicant and/or contractor shall provide SMAQMD with the anticipated construction</p>	SNGS, LLC to implement measure as defined and incorporate commitments into construction contracts.	SNGS, LLC shall document compliance with this measure. The plans shall define how and where records of project-vehicle fleet, equipment tuning, and maintenance will be kept for CPUC review during construction. SNGS, LLC shall ensure that all construction workers are aware of the vehicle idling restriction by including explanation of this requirement in the Worker Training Program. CPUC to inspect periodically for dust control within and outside the work area in order to ensure that fugitive dust has been controlled outside the	<p>(a) At least 30 days prior to submittal of applications for building permits.</p> <p>(b) At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project applicant and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman.</p> <p>(c) During</p>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>timeline, including start date and name and phone number of the project manager and on-site foreman.</p> <p>(c) The project applicant and/or contractor shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.0) shall be repaired immediately and SMAQMD shall be notified within 48 hours of identification of noncompliant equipment. A visual survey of all in-operation equipment shall be made at least weekly by contractor personnel certified to perform opacity readings, and a monthly summary of the visual survey results shall be submitted to the SMAQMD 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.</p> <p>(d) The project applicant shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_x that exceed SMAQMD's daily emission threshold of 85 pounds/day. The project applicant shall coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction-related emissions within the region. Fees shall be paid based upon the current SMAQMD Fee of \$14,300/ton of NO_x emissions generated. This fee shall be paid prior to issuance of building permits. Detailed construction information for the Proposed Project is not yet available.</p>		<p>work area.</p> <p>CPUC to ensure that commitments have been made in contracts specifying low-emission equipment. CPUC to inspect periodically for idling equipment not required for use immediately or continuously in order to minimize construction emissions.</p>	<p>construction.</p> <p>(d) During construction.</p> <p>(e) During construction.</p> <p>(f) During construction.</p> <p>(g) During construction.</p> <p>(h) After receipt of the SMAQMD Authority to Construct and Permit to Operate.</p> <p>(i) Reports will be submitted as required by CPUC Rule 112-E, Subpart B.</p> <p>(j) No action required as available new vehicles must meet California emission standards.</p> <p>(k) Compliance with California</p>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>However, based upon the preliminary URBEMIS emissions modeling, the expected payment for remaining construction-related construction NO_x emissions over the significance threshold would be \$7,513. Fees may be paid on a per-acre basis, in which case the average fee would be approximately \$356/acre. If the projected construction equipment or phases change, the applicant shall coordinate with the SMAQMD to determine if the mitigation fee needs to be recalculated.</p> <p>(e) SNGS, LLC will limit idling time of construction equipment to 5 minutes or less, when feasible.</p> <p>(f) The following applicable measures will be implemented as part of the Proposed Project to minimize dust emissions and to be consistent with SMAQMD Level One guidelines for reducing construction impacts to a less-than-significant level:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard. <p>(g) SNGS, LLC would provide the CPUC with a copy of its final Authority to Construct/Permit to Operate permit from the SMAQMD.</p> <p>(h) Aboveground piping would be maintained to minimize leakage of odorized gas. SNGS, LLC would provide incident, quarterly, and annual reports to the CPUC in accordance with CPUC Rule 112-E, Subpart B.</p> <p>(i) SNGS, LLC would use electric drill rigs and electric</p>			energy standards will be determined prior to issuance of building permits.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>compressors to avoid the emissions that would otherwise result from the use of combustion engines for these equipment elements.</p> <p>(j) SNGS, LLC will comply with CARB's Vehicle Climate Change Standards to the extent that new passenger vehicle and light trucks are purchased by the project's operators and staff starting in the 2009 model year.</p> <p>(k) SNGS, LLC will comply with the Energy Commission's California energy standards or energy efficient lighting requirements for this project.</p>			
A-2	NO _x emissions during construction will exceed the SMAQMD daily emissions threshold of 85 lbs/day.	A-2	—	<p>SNGS, LLC has committed to implementing APM 3(d) (as described in Table D.2-7) to reduce the Proposed Project's construction emissions to a less-than-significant level. The SMAQMD has established a construction emissions mitigation fee, which is to be used to fund repowering and retrofit projects for older construction equipment and similar emission reduction programs. The current fee is \$16,000 per ton of NO_x emissions in excess of the 85-pound-per-day significance threshold. The mitigation fee has been calculated for the Proposed Project (see Section 3.3 of the PEA Addendum (SNGS, LLC 2007b)). The fee is based on excess emissions that were estimated to occur only during weeks 16 and 17 of the construction schedule. The total mitigation fee for the Proposed Project is \$8,827 (\$8,407 NO_x mitigation fee plus a \$420 administrative fee). This fee has been recalculated-estimated based on the current SMAQMD fee and included as a mitigation measure with payment of the construction emissions mitigation fee to the SMAQMD. <u>The actual mitigation fee shall be based on the SMAQMD calculation method and fees at the time of payment.</u></p>	SNGS, LLC to implement measure as defined and incorporate commitments into construction contracts.	CPUC to ensure that the mitigation fee commitment has been incorporated into construction contracts.	The NO _x mitigation fee shall be paid prior to issuance of building permits.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-1	The Proposed Project could impact Sanford's arrowhead during boring of the pipeline under Morrison Creek.	B-1a	—	Prior to initiation of construction, the applicant shall retain a qualified botanist to survey for the Sanford's arrowhead from Elder Creek Road to 250 feet upstream and downstream of Morrison Creek where horizontal directional drilling (HDD) would be conducted. <u>Even though most of the habitat potentially supporting populations of this species will be avoided, activities may impact this species.</u> This survey shall be conducted during a period of time (March through May) when the phenology of the plant will allow for ready identification. Any populations found shall be fenced under the supervision of the botanist and no work shall be conducted within the fenced area. These excluded areas shall be monitored throughout the period of construction to ensure that the fencing is maintained. <u>These excluded areas shall be monitored throughout the period of construction to ensure that the fencing is maintained.</u>	SNGS, LLC to implement and mitigation measure as defined and incorporate commitments into construction contracts. SNGS, LLC to retain a CPUC-approved qualified botanist to perform surveys.	SNGS, LLC to provide survey report documentation to CPUC and to provide verification to CPUC of compliance with measure as defined.	Prior to initiation of construction during a period of time (March through May) when the phenology of the plant will allow for ready identification. Survey area would be located along Elder Creek Road to 250 feet upstream and downstream of Morrison Creek where HDD would be conducted.
B-1	Pipeline construction and other activities may impact the seasonal wetlands (including vernal pools and vernal pool fairy shrimp) in the project area.	B-1b	—	A protocol-level vernal pool fairy shrimp survey shall be conducted by a qualified biologist at each potential wetland habitat. If this is not conducted, then it shall be assumed that each potential vernal pool contains these species. These assumed-occupied areas shall be avoided where possible by fencing off these areas and monitoring during construction to ensure the areas are not disturbed. Also, use of HDD to avoid these areas should be used where feasible. Consultation shall be conducted with the USFWS to obtain any necessary permits or approvals if populations or assumed populations would be disturbed. For areas that cannot be avoided, at least two vernal pool credits shall be purchased prior to any construction at a USFWS-approved preservation bank for every acre directly or indirectly impacted.	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contracts. SNGS, LLC to retain a CPUC-approved qualified biologist to perform surveys.	SNGS, LLC to provide survey report documentation to CPUC and to provide verification to CPUC of compliance with measure as defined.	Prior to and during construction for all identified wetland habitat areas.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-1	Implementation of the Proposed Project could impact giant garter snakes potentially using the project area as habitat (although this is not likely).	B-1c	—	Construction in areas determined to be potential habitat for the giant garter snake shall be conducted between May 1 and October 1. Moreover, consultation shall be conducted with the USFWS to obtain the necessary permits and approvals. Surveys for the species shall be conducted 24 hours before commencement of construction activities or potential activity. Any occupied area shall be avoided by construction. Any impact to upland or marsh vegetation shall be mitigated by restoration of habitat after completion of impacts. <u>Monitors shall have the appropriate training to identify the species during construction. If the species is encountered, all construction work shall cease. After construction ceases, the USFWS and CDFG will be notified and additional measures will be developed with those agencies to avoid impacts to individuals. Once these mitigations are in place and approved by the agencies, then construction in the area can resume. Debris shall be removed after completion of construction.</u>	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contracts. SNGS, LLC to retain a CPUC-approved qualified biologist to perform surveys and shall coordinate with USFWS for necessary permits/approvals.	SNGS, LLC to provide survey report documentation to CPUC and to provide verification to CPUC of compliance with measure as defined.	Prior to and during construction for all areas identified as suitable giant garter snake habitat.
B-1	Implementation of the Proposed Project could impact nesting burrowing owls.	B-1d	—	Owls could nest in the Proposed Project area during the spring and summer, although no nesting owls were noted during the prior biological surveys, However, they could begin nesting prior to construction, Therefore, preconstruction surveys shall be conducted by a qualified biologist within 30 days prior to initiation of construction. If burrowing owls are observed between February 1 and August 15, a 250-foot buffer shall be established around the burrow and no work shall commence in the buffer zone until young have fledged. If construction is occurring during non-breeding season, then passive relocations shall be conducted under supervision by the CDFG.	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contracts. SNGS, LLC to retain CPUC-approved qualified biologist to perform surveys.	SNGS, LLC to provide survey report documentation to CPUC and to provide verification to CPUC of compliance with measure as defined.	Prior to and during construction for all areas identified as suitable burrowing owl habitat.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-1	Implementation of the Proposed Project would result in loss of or substantial disturbance to approximately 1 acre of grassland habitat (foraging habitat for Swainson's hawk and other raptors).	B-1e	—	The applicant shall mitigate for loss of habitat on a 1.75:1 ratio through purchase of mitigation bank credits in a CDFG mitigation bank or payment of a mitigation fee to an approved habitat mitigation bank. This would be for the permanent loss of habitat at the proposed compressor station site and proposed wellhead site.	SNGS, LLC to implement mitigation measure as defined.	SNGS, LLC shall provide verification to CPUC of compliance with measure as defined.	Prior to issuance of grading permit.
B-1	Construction activities (including noise and presence of workers) could result in significant impacts to nesting raptors and other nesting migratory birds.	B-1f	—	No nesting birds were recorded during previous surveys; however, birds could nest prior to construction in the spring and summer. Therefore, preconstruction surveys shall be conducted during the breeding season (February 1 through August 30) within one-half mile of all construction activities. The survey shall be conducted by a qualified biologist to determine if any nesting raptors or migratory birds are present. If present, construction shall be delayed until the birds have fledged. If that is not possible, then a 250-foot buffer zone shall be established in consultation with the CDFG and the nests shall be monitored during construction.	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contracts. SNGS, LLC to retain CPUC-approved qualified biologist to perform surveys.	SNGS, LLC shall provide verification to CPUC of compliance with measure as defined.	Prior to construction during the breeding season (February 1 through August 30) within one-half mile of all construction activities. Also monitoring shall occur during construction if necessary.
B-2 and B-3	Impacts to riparian habitat and other sensitive habitat, including wetlands.	—	1	SNGS, LLC would identify work areas and would ensure that: <ul style="list-style-type: none"> • Construction activities, equipment, and associated activities (e.g., staging areas) are confined to the designated work zones • Areas supporting sensitive resources (e.g., nearby seasonal wetlands and special-status species' 	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of measure including submittal of construction contract.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>habitat) are avoided.</p> <p>Construction equipment would be confined to a designated work zone in the project area. Before ground-disturbing activities are initiated, the work zone would be clearly staked and flagged. Where feasible, all adjacent waters and wetlands would be avoided and would be designated as exclusion zones during the preconstruction phase.</p>			
B-2 and B-3	Impacts to riparian habitat and other sensitive habitat, including wetlands.	—	2	<p>SNGS, LLC would conduct Worker Environmental Awareness Program (WEAP) training for construction crews before construction activities begin. The WEAP training would include a brief review of the special-status species and other sensitive resources that could occur in the Proposed Project area (including their life history and habitat requirements and what portions of the Proposed Project area they may be found in) and their legal status and protection. The program would also cover all mitigation measures; environmental permits; and Proposed Project plans, such as the best management practices (BMPs), erosion control and sediment plan, and any other required plans. During WEAP training, construction personnel would be informed of the importance of avoiding ground-disturbing activities outside of the designated work area. The designated environmental inspector would be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. WEAP training sessions would be conducted as needed for new personnel brought on to the job during the construction period (relative to the area in which the employee would be working and the tasks the employee would be completing).</p>	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of worker training program and compliance with measure as defined.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-2 and B-3	Impacts to riparian habitat and other sensitive habitat, including wetlands.	—	12	<p>The equipment used for the Proposed Project would require periodic maintenance and refueling. To reduce the potential of contamination by spills, no refueling, storage, servicing, or maintenance of equipment would be performed within 100 feet of sensitive environmental resources (e.g., seasonal wetlands and Morrison Creek). Additionally, all refueling or servicing would be done with absorbent material or drip pans underneath equipment to contain spilled fuel or fluids. Any fluids drained from the machinery during servicing would be collected in leak-proof containers and taken to an appropriate disposal or recycling facility. If such activities result in spillage or accumulation of a product on the soil, the contaminated soil would be assessed and disposed of properly. Under no circumstances would contaminated soils be added to a spoils pile.</p> <p>Mobile refueling trucks likely would be used for on-site refueling of stationary construction equipment. The refueling trucks would be independently licensed and regulated to haul and dispense fuels and to ensure that the appropriate spill prevention techniques are implemented. All maintenance materials (i.e., oils, grease, lubricants, antifreeze, and similar materials) would be stored in a designated storage area, away from site activities and more than 100 feet from sensitive resources. During construction, all vehicles and equipment required on site would be parked or stored at least 100 feet from waterbodies, wetlands, and other sensitive resource areas. These areas would be identified on the construction drawings, as appropriate. All wash-down activities would be conducted at least 100 feet from sensitive environmental resources.</p>	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications.	During construction at various refueling and service areas.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-2	Impacts to other sensitive habitat.	—	13	Following installation of the pipeline, the right-of-way would be graded to preconstruction grades and contours and would be seeded with an appropriate seed mix. The seed mix would be composed of the appropriate mix of species and be acceptable to the landowner. All disturbed areas of paved roadways would be repaved.	SNGS, LLC to implement APMs and mitigation measures as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications. CPUC to inspect to ensure success of reseeded areas.	Prior to, during, and after construction along the graded right-of-way.
B-3	Implementation of the Proposed Project could potentially impact wetlands and other waters of the U.S., as well as wetlands under the jurisdiction of CDFG and RWQCB.	B-3a	—	The wetlands delineation prepared by Sycamore Environmental Consultants (2008) for those areas not verified in the earlier delineation by CH2M Hill shall be verified and concurrence on the areas of ACOE jurisdiction shall be obtained by ACOE. Wetlands shall be avoided where feasible either through rerouting of the pipeline or use of HDD. Where wetlands cannot be avoided, the loss of the wetlands shall be compensated for through restoration of the wetlands or through creation of wetlands elsewhere, either directly or through an established wetlands bank approved by the ACOE. <u>The project shall comply with the ACOE's policy to ensure no net loss of wetlands or waters of the U.S., and their associated functions and values.</u> CDFG or RWQCB permits shall be obtained by the appropriate agency prior to initiation of construction. It is estimated that the mitigation ratios will be between 2 to 1 and 3 to 1.	SNGS, LLC to retain a CPUC-approved qualified biologist to verify wetlands delineation prepared by Sycamore. If wetlands cannot be avoided, SNGS, LLC to provide appropriate mitigation.	SNGS, LLC shall provide verification to CPUC of compliance with measure as defined.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
B-3	Implementation of the Proposed Project could potentially impact wetlands and other waters of the U.S., as well as wetlands under the jurisdiction of CDFG and RWQCB.	B-3b	—	<p>Creek and drainage crossings shall be conducted in a manner that does not result in a sediment-laden discharge or hazardous materials release to the waterbody. The following measures shall be implemented during horizontal boring (jack and bore) operations:</p> <ol style="list-style-type: none"> (1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. <u>In the event of a frac-out, the activities shall be stopped immediately, the material shall be removed and the site restored to previous conditions.</u> (2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of bank or wetland/riparian boundary for Morrison Creek. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). (3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10 gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. (4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion and temporary sediment barriers left in place until restoration is deemed successful. (5) SNGS, LLC shall obtain the required permits prior to conducting work associated with HDD activities and 	SNGS, LLC to prepare HDD plan.	SNGS, LLC must receive approval of HDD plan by CPUC and CDFG.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				provide proof to CPUC. Required permits may include ACOE CWA Section 404, RWQCB CWA 401, CDFG Streambed Alteration Agreement 1602. SNGS, LLC shall implement all pre- and post-construction conditions identified in the permits issued for HDD activities. This will involve methods to avoid or remediate frac-outs.			
B-6	Potential conflict with local policies protecting biological resources, such as a tree preservation policy or ordinance.	B-6	—	SNGS, LLC shall coordinate with the City of Sacramento and the Department of the Army to avoid any loss of wetlands or to compensate for loss within the natural resource protection area set aside in The Sacramento Army Depot Reuse Plan. This could include increased use of HDD, or compensation for any wetland loss on a 2 or 3-to-1 basis. <u>The project shall comply with the ACOE's policy to ensure no net loss of wetlands or waters of the U.S., and their associated functions and values.</u>	SNGS, LLC to prepare construction documents that demonstrate avoidance of the natural resource protection area or through permitting with ACOE prove compensation for wetland loss.	SNGS LLC to provide construction documents or ACOE permit to City of Sacramento and CPUC to provide verification of compliance with measure as defined.	Prior to issuance of grading permits.
C-2	Construction of the Proposed Project could affect undiscovered cultural resources.	C-2a	—	SNGS, LLC shall <u>contract with a professional archaeologist who meets the Secretary of Interior's standards for prehistoric archaeology to develop a Cultural Resources Treatment Plan (CRTP).</u> The CRTP shall include procedures for protection and avoidance, of ESAs and archaeological high probability areas; evaluation, and treatment of the unexpected discovery of archaeological <u>cultural</u> resources including Native American burials; detailed reporting requirements by the Project Archaeologist; curation of any cultural materials collected during the Project; and requirements to specify that archaeologists and other discipline specialists meet the	SNGS, LLC to provide CRTP.	CPUC to review and approve CRTP to ensure that cultural resources are protected and properly managed.	Prior to construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>Professional Qualification Standards mandated by the California Office of Historic Preservation.</p> <p>Specific protective measures such as avoidance shall be defined in the CRTP to reduce potential adverse impacts on any presently undetected archaeological cultural resources to less-than-significant levels. The CRTP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction. The CRTP shall <u>discuss the types of resources that could possibly be associated with</u>define construction procedures for areas near the two known/recorded unevaluated railway lines that are to be bored under and/or are adjacent to the proposed pipeline, and shall outline the monitoring program to be used during the implementation of Mitigation Measure C-2b cultural sites.</p> <p>If the CPUC, in consultation with the qualified archaeologist, <u>determines that a unique archaeological resource is present and that the resource could be adversely affected by the Proposed Project, the CPUC shall require re-design of the project to avoid any adverse effect on the unique archaeological resource; or the CRTP shall identify how a proposed data recovery program would preserve the significant information of any discovered archaeological resource it is expected to contain. That is, the CRTP shall identify the scientific/historical research questions that are applicable to the expected resource classes, the data classes the resource(s) is expected to possess, and how the expected data classes would address the applicable research questions. Should the preferable treatment of avoidance be infeasible, data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Proposed Project. Destructive</u></p>			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p><u>data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.</u></p> <p><u>All reporting shall be consistent with current professional practice, consistent with the relevant sections of the <i>Archaeological Resource Management Reports: Recommended Contents and Format</i> (California Department of Parks and Recreation 1990), and shall be presented to the CPUC and North Central Information Center of the California Historic Resources Information System within 60 days of completion of the project.</u></p>			
C-2	Construction of the Proposed Project could affect undiscovered cultural resources..	C-2b	—	<p>Conduct construction monitoring. Archaeological monitoring shall be conducted by a qualified archaeologist (see Mitigation Measure C-2a) familiar with the types of historic and prehistoric resources that could be encountered within the Proposed pipeline alignment. A Native American monitor may also be required at the discretion of the project archaeologist.</p> <p>Any archaeological resources. Cultural resources discovered during monitoring shall be evaluated to determine if they are "unique archaeological significant historical resources," as defined by CEQA. The effect of the project on unique archaeological significant historical resources shall be determined. If the finding is determined to be a unique archaeological significant historical resource, and if avoidance of the resource is not feasible, then a data recovery program shall be performed pursuant to the CRTP (see Mitigation Measure C-2a). Any resultant archaeological collections and their records shall be curated at an appropriate institution.</p>	<p>SNGS, LLC to retain a qualified archaeologist to perform construction monitoring.</p> <p>Archaeologist to provide extraction plan to SNGS, LLC and CPUC if needed.</p> <p>SNGS, LLC to contact county coroner if human remains are found.</p> <p>Corner to contact NAHC if appropriate.</p>	<p>The qualifications of the qualified archaeologist shall be approved by the CPUC.</p> <p>CPUC and NAHC to review extraction plan if needed.</p> <p>CPUC and SNGS, LLC monitors to ensure work is suspended upon discovery of resources to ensure avoidance of all significant cultural resources.</p> <p>If avoidance is not possible upon</p>	During ground-breaking activities in all construction areas.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>If human remains are discovered, there shall be no further excavation or disturbance of the discovery site or any nearby area reasonably suspected to overlie adjacent human remains until the project applicant has immediately notified the cCounty cCoroner and otherwise complied with the provisions of State CEQA Guidelines Section 15064.5(e) (AEP 2008). If the remains are found to be Native American, the cCounty cCoroner shall notify the Native American Heritage Commission (NAHC) within 24 hours pursuant to Public Resource Code Section 5097.98. The most likely descendant of the deceased Native American shall be notified by the NAHC and given <u>a minimum of 48 hours from the time of notification for the opportunity to make a recommendation for the proper disposition of human remains.</u> If the NAHC is unable to identify the most likely descendant, or if no recommendations are made within <u>24-72 hours</u>, remains may be reinterred with appropriate dignity elsewhere on the property in a location not subject to further subsurface disturbance. If recommendations are made and not accepted, the NAHC will mediate.</p>		<p>conclusion of evaluations, data recovery research program exhausts potential of site to yield further important information.</p>	
G-2	Exposure of people or structures to ground acceleration or shaking, which could damage project components.	—	4a	<p>The Proposed Project would be designed to meet the seismic safety standards of the California Building Code (CBC). Specific design measures may include but are not limited to special foundation design, additional bracing and support of upright facilities (e.g., tanks, exhaust stacks), and weighting the pipeline in areas of potential liquefaction. In addition, automated leak detection, isolation, and shutdown controls would limit the secondary effects of equipment damage. Project facilities and foundations would be designed to withstand changes in soil density. When the</p>	<p>SNGS, LLC to implement measure as defined. SNGS, LLC to submit final design to CPUC, City of Sacramento, DOT Office of Pipeline Safety, and DOGGR for their review and approval.</p>	<p>CPUC to verify that design has incorporated specific conditions to remediate impacts caused by ground shaking.</p>	<p>Prior to construction of wellhead site, compressor station, and pipelines.</p>
G-7	Potential risk to life or property due to presence of						

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
	expansive soils.			detailed engineering design of the project is completed, it would be submitted to the CPUC, Department of Transportation (DOT) Office of Pipeline Safety (which provides oversight of pipeline construction, operation, and safety) and the DOGGR (which provides oversight of design, installation, and operation of gas wells) for their review and approval.			
G-2	Exposure of people or structures to ground acceleration or shaking, which could damage project components.	—	4b	The Proposed Project will be designed in accordance with the Natural Gas Pipeline Safety Act of 1968 and CPUC General Order 112-E and implement design specifications as identified in the geotechnical engineers report (Terracon 2008) to reduce primary and secondary risks associated with seismically induced ground shaking.	SNGS, LLC to implement measure as defined and submit final design to CPUC, City of Sacramento, and DOT Office of Pipeline Safety, and DOGGR for their review and approval.	CPUC to verify that design has incorporated specific conditions to remediate impacts caused by ground shaking.	Prior to construction of wellhead site, compressor station, and pipelines.
G-2	Project structures and facilities could be damaged as a result of seismically induced ground shaking.	G-2	—	The seismic design of the facilities will employ a lateral acceleration one-third greater than that required by the 2007 CBC. Therefore, the facilities will be designed to withstand ground shaking higher than anticipated by the CBC.	SNGS, LLC to implement measure as defined and submit final design to CPUC, City of Sacramento, DOT Office of Pipeline Safety, and DOGGR for their review and approval.	CPUC to verify that design has incorporated specific conditions to remediate impacts caused by ground shaking.	Prior to construction of wellhead site, compressor station, and pipelines.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
G-5	Soil erosion	—	APMs 1, 2, and 14	See Table D.7-3, in Section D.7, Hydrology and Water Quality, for description of APMs 1, 2, and 14.	SNGS, LLC to implement APMs as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of measure as defined.	Prior to construction.
G-9	Impact unique geological or paleontological resources	—	6	<p>A paleontological resources discovery and management plan would be developed prior to construction and implemented as part of the Proposed Project to avoid potential impacts on these resources. The plan would contain the following elements:</p> <ul style="list-style-type: none"> • Paleontological Mitigation Plan—Prior to the start of construction, a qualified paleontologist shall be retained to design a paleontological resource mitigation and monitoring program and to implement this program during earthmoving activities. The mitigation and monitoring program shall include the following: <ul style="list-style-type: none"> ○ Preconstruction coordination ○ Construction monitoring procedures that include the use of qualified paleontological resources monitors in sensitive areas ○ Procedures to be followed if a previously unidentified paleontological resource is discovered during construction that include halting all ground-disturbing activity in the vicinity of the discovery; notification of the City of Sacramento Community 	SNGS, LLC to provide paleontological resources discovery and management plan.	CPUC to review and approve paleontological resources discovery and management plan to ensure that paleontological resources are protected.	Prior to construction of project components.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>Development Department or the County of Sacramento, as appropriate; and specimen or data recovery as determined adequate by a qualified paleontologist and consistent with the Society of Vertebrate Paleontology guidelines.</p> <ul style="list-style-type: none"> ○ Sampling and data recovery procedures (if necessary) ○ Museum storage coordination for any specimens or data recovered ○ Report of findings. <ul style="list-style-type: none"> ● Field Survey—Prior to the start of construction, the paleontologist shall conduct a field survey of exposures of sensitive stratigraphic units within the construction area that will be disturbed. ● Construction Personnel Education—Prior to the start of construction activities, construction personnel involved with earthmoving activities will be informed of the possibility of encountering fossils, the appearance of fossils, the types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This worker training will be prepared and presented by a qualified paleontologist. ● Paleontological Monitoring—The paleontologist shall monitor earthmoving construction activities where this activity will disturb previously undisturbed sediment. Monitoring will not take place in areas 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				underlain by artificial fill or in areas where exposed sediment will be buried but not otherwise disturbed.			
G-9	Impact unique geological or paleontological resources.	G-9	—	Prior to the start of construction, a qualified paleontologist will conduct a field survey to identify sensitive stratigraphic units within the construction area that might be disturbed. If paleontological resources are discovered during construction-related earthmoving activities, all ground-disturbing activity in the vicinity of the discovery will be halted; the City of Sacramento Community Development Department or the County of Sacramento, as appropriate, will be notified; and specimen or data recovery, as determined adequate by a qualified paleontologist and consistent with the Society of Vertebrate Paleontology guidelines, will be completed before construction in the vicinity of the discovery resumes. These procedures ensure that the Proposed Project will have a less-than-significant impact on paleontological resources.	SNGS, LLC to retain a qualified paleontologist to conduct a field survey.	The qualifications of the qualified palaeontologist to be approved by the CPUC.	Prior to construction.
HAZ-1a	Potential hazardous substance spills during construction.	—	7	The following measures would be incorporated into the construction contract specifications to address hazardous materials generated from construction-related activities: <ul style="list-style-type: none"> • Diesel fuel and petroleum-based lubricants shall be stored only at designated staging areas. • Regardless of the quantity spilled, all hazardous material spills or threatened releases(including petroleum products such as gasoline, diesel, and hydraulic fluid) must be immediately reported if the spill has entered or threatens to enter a water of the State of California or the U.S., or has caused injury to a person or threatens injury to public health. 	SNGS, LLC to incorporate measure as defined and incorporate into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
HAZ-1a	Potential hazardous substance spills during construction.	—	8	SNGS, LLC would prepare a Hazardous Materials Contingency Plan that would be implemented if a spill occurs or if any hazardous materials are encountered during construction. Provisions outlined in this plan would include phone numbers of city, county, state, and federal agencies and primary, secondary, and final cleanup procedures. In addition, SNGS, LLC would require the project contractor to prepare an HSP to minimize environmental impacts in the event that hazardous soils or other materials are encountered during construction of the project. The HSP would include elements that establish worker training, engineering controls, and monitoring. The HSP also would establish security measures to prevent unauthorized entry to cleanup sites and to reduce hazards outside the investigation/cleanup area.	SNGS, LLC to prepare a Hazardous Materials Contingency Plan. SNGS, LLC to require project contractor to prepare an HSP.	CPUC and the City of Sacramento to review Hazardous Materials Contingency Plan and HSP to ensure compliance with measure.	Hazardous Materials Contingency Plan: Prior to grading permit issuance HSP: Prior to construction.
HAZ-1a	Potential hazardous substance spills during construction.	—	9	SNGS, LLC would prepare an Emergency Response Plan, for use in response to a pipeline-related emergency (e.g., gas leak, earthquake, accidental release of hazardous materials or waste, fire, and/or pipeline or facility damage). Included in this plan would be measures for fire prevention. The plan would be designed in accordance with state and federal regulations, including 49 CFR 192, Health and Safety Code (Chapter 6.95), and Titles 19, 22, and 27 of the CCR.	SNGS, LLC to prepare an Emergency Response Plan and submit to the CPUC and City of Sacramento.	CPUC to review Emergency Response Plan to ensure compliance with measure.	Prior to construction.
HAZ-1a	Potential hazardous substance spills during construction.	HAZ-1a	—	Hazardous wastes generated during construction and operation of the Proposed Project shall be transported to an approved facility for the specific type of material.	SNGS, LLC to implement measure.	SNGS, LLC to document compliance with hazardous materials, public health, and safety measure.	During construction and operation.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
HAZ-1b	HDD activities during the construction of the wellhead site and pipeline segments will produce contaminated drilling mud and cuttings that will require proper disposal.	HAZ-1b	—	SNGS, LLC shall contain drilling mud and cuttings from well drilling and HDD in portable tanks and shall remove and dispose of these at approved facilities for this type of waste.	SNGS, LLC to implement measure.	SNGS, LLC to document compliance with hazardous materials, public health, and safety measure.	During construction and HDD activities.
HAZ-1c	The Proposed Project would involve the routine transportation, use, and storage of methyl mercaptan, a hazardous gas used to detect natural gas leaks.	HAZ-1c through HAZ-1ciii	—	<p>HAZ-1ci—SNGS, LLC shall ensure that transportation of methyl mercaptan used in project operations shall comply with all DOT, Caltrans, EPA, DTSC, California Highway Patrol, and California State Fire Marshal regulations, including the Vehicle Code Section 32100 (Division 14.3) for transportation of inhalation hazards.</p> <p>HAZ-1cii—SNGS, LLC shall require that the route used to deliver methyl mercaptan be use US-50 (instead of SR-99) and Howe Avenue to either Power Inn Road or to Folsom Boulevard, Jackson Road, and Florin Perkins Road. This will minimize exposure to sensitive receptors. <u>This material shall only be transported during nighttime hours.</u></p> <p>HAZ-1ciii—SNGS, LLC shall only store and inject methyl mercaptan exclusively at the compressor station. If that is not feasible, the methyl mercaptan shall be stored in a specialized structure and the delivery routes shall be similar to that for the compressor station, except that only a small-portion of Power Inn Road shall be used.</p>	SNGS, LLC to implement measures.	SNGS, LLC to document compliance with hazardous materials, public health, and safety measure.	Prior to construction permit and when methyl mercaptan is transported to the project site.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
HAZ-2a	Potential for a gas leak from the gas reservoir after repressurization of the gas field for gas storage.	—	5	DOGGR is responsible for wells drilled into an underground gas storage facility. SNGS, LLC would complete engineering and geology studies and an injection plan and submit them to DOGGR for approval. These studies would describe the well drilling and abandonment plans; reservoir characteristics; all geologic units, aquifers, and oil and gas zones; and the monitoring system to ensure that injected gas is confined to the intended zone. SNGS, LLC would be required to post a bond with DOGGR to ensure proper completion or abandonment of any well drilled. Additionally, DOGGR would be responsible for approving a water injection plan that would allow SNGS, LLC to inject water that is extracted from the gas field back into the gas field.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to obtain approval from DOGGR and provide verification to CPUC of compliance with measure.	Prior to drilling of wells.
HAZ-2a	The Proposed Project would involve the potential for gas leaks after pressurization of the gas field.	HAZ-2ai	—	SNGS, LLC shall conduct laboratory tests of cores and may also conduct in situ (in place) bore-hole tests of the cap rock structure, if recommended after review by qualified industry experts prior to storage of natural gas. These tests shall include determination of the cap rock strength properties to facilitate assessment of the cap rock integrity relative to the projected pressures exerted by the stored natural gas. If possible, these tests will also provide data that allows assessment of the effects of the cycling of gas pressure during operation of the gas storage facility. These tests shall determine the properties of the cap rock itself, including permeability and strength of the cap rock within the range of the projected gas storage pressures. These tests shall be monitored and approved by the DOGGR who will review tests relative to the proposed storage pressure prior to allowing the storage of natural gas. Results of the studies shall also be made available to Sacramento County Department of Environmental Management and the Regional Water Quality Control Board.	SNGS, LLC to conduct lab tests to determine strength and fluid/gas permeability of the cap rock.	Lab tests to be monitored and approved by DOGGR and CPUC.	Prior to issuance of construction permit.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
HAZ-2a	The Proposed Project would involve the potential for gas leaks after pressurization of the gas field.	HAZ-2a ⁱⁱ	—	<p>SNGS, LLC shall develop a gas detection plan at key points within the area over the Florin Gas Field. The plan will include the installation of monitoring wells for detection of anomalous pressure changes in the deep groundwater aquifer immediately above the cap rock structure. These wells shall be equipped with instrumentation to monitor and record (with electronic data loggers) aquifer pressure, temperature, and other parameters as needed. The number, location, depth, screened interval, and instrumentation of the deep aquifer monitor wells will be selected jointly by qualified petroleum industry and groundwater experts. The intent of the deep aquifer wells is to allow detection of the anomalous pressure, which is a way to tell if there is leakage of stored gas into zones above the cap rock from the underlying Florin Gas Field. <u>One monitoring station shall be included at the Florin Portable Water Storage Reservoir.</u></p> <p>This plan shall also include gas detection instruments, well probes, and sampling of the aquifer for entrained natural gas. This plan shall be reviewed and approved by DOGGR where applicable, the City of Sacramento Fire Department, <u>City of Sacramento Department of Utilities, Regional Water Quality Control Board, and the Sacramento County Environmental Management Department</u> prior to implementation and shall include natural gas detectors at strategic locations. In the event that natural gas is detected and confirmed to be seeping from the reservoir, the gas reservoir shall be reduced to lessen and eliminate the potential for seepage. The deep aquifer monitoring will commence prior to repressurizing the Florin gas reservoir, so that baseline conditions can be established, including</p>	SNGS, LLC to develop a gas detection plan.	Gas detection plan to be reviewed and approved by CPUC, City of Sacramento Fire Department, and Sacramento County Environmental Management Department.	Prior to issuance of construction permit.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>ambient levels of natural gas if present.</p> <p>The four primary elements of this gas monitoring mitigation measure are:</p> <ol style="list-style-type: none"> 1) Establish a baseline or background level for natural gas at the surface prior to storage operations. This will allow comparison and sound evaluation of future Project-related gas monitoring results. 2) Periodically measure for levels of detectable gas at pre-determined surface locations. This will allow the storage operator to ascertain whether the levels of gas detected at the surface, if any, have increased noticeably above the previously established background levels. It is expected that small variations may occur which may not individually rise to any significant level, but trends over several sample periods could provide an indication of a change that requires further investigation. 3) Quantify and, if necessary, qualify any changes in an attempt to identify the source. First, based on sampling and testing of gas samples, it should be determined whether the gas quality signature is similar to the native gas production in the area or to pipeline gas. Gas in the storage reservoirs will be almost exclusively pipeline gas with components that should be relatively easy to identify compared to native gas. 4) Based on any specific changes observed, the operator shall respond to the data and corresponding analysis with additional testing, surveillance, or mitigation, as appropriate. If the data indicates that any detected surface gas is from the storage operation, then a plan will be developed to identify the leaking pipeline, well or 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>reservoir, including procedures to further test and correct the situation. If it appears that the source of the gas is related to a non-storage facility, the operator should attempt to identify the owner or operator of that facility and inform them of the findings of the study. The overall gas monitoring program will be evaluated after 5 years to determine its future usefulness.</p> <p>The monitoring program will consist of the following features:</p> <ul style="list-style-type: none"> • Permanent monitoring/testing sites at the pProject wellhead site and compressor station site • Leakage surveys at predetermined locations on a regular basis • Utilize standard, industry-approved gas measurement equipment • Field personnel trained on gas sampling methods and instrumentation, identifying stressed vegetation and other indicators of potential leakage. <p>Two permanent test stations will be located at the wellhead site. Two additional test stations will be installed at the compressor station site. Additional sites for sampling shall be identified in the sampling plan. Baseline measurements, using portable analytical gas instruments, will be made within 48 hours of the installation of the test station. Portable analytical gas instruments will consist of infrared gas analyzers or other combustible gas analyzers. Flame Ionization Detectors (FID) may be used as the primary detector for monitoring. All portable analytical gas equipment will be calibrated daily using a laboratory-certified methane calibration gas. All test sites will be</p>			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				identified and all test data will be gathered and recorded. The testing program will be conducted prior to initiation of injection of gas and weekly thereafter. <u>Water quality information shall be made available to the City of Sacramento Department of Utilities.</u>			
HAZ-2b	The Proposed Project would introduce the potential for the release of natural gas and resulting fire and explosion from the wellhead site, compressor station, and pipelines.	—	8	See description of APM 8 in this table.	SNGS, LLC to implement measure as defined.	SNGS, LLC to provide verification of compliance with measure to CPUC.	Prior to construction permit.
HAZ-2b	The Proposed Project would introduce the potential for the release of natural gas and resulting fire and explosion from pipelines	—	10	SNGS, LLC would design the pipelines between Fruitridge Road and the compressor station, and between the compressor station and the wellhead site with a design safety factor of 0.4, which exceeds the Class 3 standard applicable to the project under the provisions of 49 CFR 192.5. SNGS, LLC would also place the pipeline under a minimum of 6 feet of earthen cover in all locations, which exceeds the 3-foot minimum standard applicable to the project.	SNGS, LLC to implement measure as defined.	SNGS, LLC to provide verification of compliance with measure to CPUC.	Prior to construction permit.
HAZ-2b	The Proposed Project would introduce the potential for the release of natural gas and resulting fire and	HAZ-2bi through HAZ-2bix	—	HAZ-2bi—The following mitigation shall be incorporated into the compressor station site: <ul style="list-style-type: none"> • The compressor station shall be secured by two levels of security. The perimeter of the 382-acre industrial park is secured with a security fence and gate, with a 24-hour site security staff. The 	SNGS, LLC to implement measures HAZ 2bi and HAZ-2bii. For HAZ-2biii, SNGS, LLC to ensure that CPUC conducts third-	SNGS, LLC to provide evidence of compliance with measures.	HAZ-2bi and HAZ-2bii: Prior to issuance of construction permits. HAZ- biii: Prior to

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
	explosion from wellhead, compressor station, and pipelines.			<p>compressor station site itself will be surrounded by an 8-foot-high steel security fence with barbed wire, with gates maintained in a closed and locked default status, actuated with key cards.</p> <ul style="list-style-type: none"> • The station's control center, which is located at the compressor station site, shall be manned 24 hours per day. • Emergency backup power shall be provided by a 75-kilowatt natural gas diesel generator. • Motion detectors shall be installed on posts along the perimeter security fence. Motion detected within the facility will result in an alarm and trigger the activation of security lighting during periods of darkness. • A security lighting system shall be provided within the compressor station site. The system will be manually operated, but will have automatic activation in the event of an emergency alarm for fire, smoke, or intrusion. • All buildings on the site shall be equipped with fire and smoke detectors. In addition, the compressor building will be equipped with heat and flash detectors. All sensors will be integrated into the control system with audible and visual alarms. • <u>Operators shall be trained and hold the required certifications for the operation of the compressor station and other facilities.</u> 	<p>party review of construction plans. SNGS, LLC to implement measures HAZ-2biv through HAZ-2bix.</p>		<p>operation of project. HAZ-2biv-2bvi: Prior to issuance of construction permit. HAZ-2bviii: if the Maximum Allowable Operating Pressure (MAOP) creates a circumferential stress greater than 40% of the Specified Minimum Yield Strength (SMYS) in pipelines. HAZ-2bix: Prior to issuance of construction permit.</p>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>The additional measures shall also be provided:</p> <ul style="list-style-type: none"> • <u>A service gap analysis shall be conducted at the applicant's expense by a well control specialist to identify and recommend additional fire and explosions protection including but not limited to infrastructure improvements. The analysis shall include an evaluation of equipment and training for first responders to meet the strategies outline in the Emergency Action Plan. The applicant shall establish a funding mechanism to cover one time costs and continued costs relative to training and equipment for departments and for any infrastructure costs.</u> • <u>The applicant 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 the fire department. The firm selected shall be approved by the fire department. Costs shall be paid by the applicant.</u> • <u>City costs for emergency response including response by other departments shall be paid or guaranteed by the Applicant in accordance with the Sacramento hazardous materials Emergency Response Ordinance.</u> <p>HAZ-2<i>bi</i>—The following mitigation shall be incorporated into the wellhead site portion of the project:</p> <ul style="list-style-type: none"> • The wellhead site shall be surrounded by a 10-foot-high masonry wall, with a security gate actuated by key card entry. 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<ul style="list-style-type: none"> • The wells shall be provided with fire and gas detectors and will be under continual audio/video surveillance from the continually manned compressor station. They will also be provided with three <u>emergency shutdown (ESD)</u> valves: a subsurface down-hole ESD, an ESD located at the wellhead, and an ESD located at the pipeline interface. In the event that of either a high or low pressure alarm <u>is set off</u>, a fire alarm at the wellhead is detected, or potentially dangerous level of natural gas is detected, these ESD valves will automatically close in order to limit the supply of natural gas to the fire or leak. • A third-party peer review shall be conducted by a well control specialist, under the supervision of the Sacramento City Fire Department <u>and DOGGR.</u> • A backup power system shall be installed to provide electrical power in an emergency or power outage. • A security lighting system shall be provided. The system will be manually operated, but will have automatic activation in the event of an intrusion. • Motion detectors shall be installed along the top, inside perimeter of the masonry wall. Motion detected within the facility will result in an alarm and trigger the activation of security lighting during periods of darkness. • Security cameras shall be installed along the inside top of the masonry wall. Visual signals will 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>be relayed to the Control Center 24 hours per day.</p> <ul style="list-style-type: none"> All alarms at the wellhead site shall be monitored 24 hours per day at the Control Center. <p>HAZ-2biii—The CPUC shall conduct, or cause to be conducted in coordination with the DOT, an independent, third-party design review of the applicant’s construction drawings, supporting calculations, and specifications and shall monitor and observe construction to ensure compliance with all applicable LORS. <u>This review shall also include a review of the pipeline control and leak detection system to ensure that the system performance is consistent with the assumptions stated in Appendix B.</u> The applicant shall make payments to the CPUC for these design review, plan check, and construction inspection services. These design review and construction observation services shall not in any way relieve the applicant of its responsibility and liability for the design, construction, operation, maintenance and emergency response for these facilities.</p> <p>HAZ-2biv—A 6-inch-wide polyethylene marker tape shall be installed approximately 18 inches below the ground surface, above the center of the pipeline. The marking tape shall be brightly colored and shall be marked with an appropriate warning (e.g., Warning—High-Pressure Natural Gas Pipeline).</p> <p>HAZ-2bv—100% of the circumferential welds shall be radiographically inspected in accordance with</p>			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>American Petroleum Institute (API) Standard 1104, Welding of Pipelines and Related Facilities. This shall be approved by the DOT.</p> <p>HAZ-2bvi—The applicant shall submit to the CPUC an operation and maintenance (O&M) manual, prepared in accordance with 49 CFR 192.605. The O&M manual shall address internal and external maintenance inspections of the completed facility, including but not limited to details of integrity testing methods to be applied, corrosion monitoring and testing of the cathodic protection system, and leak monitoring. In addition, the O&M manual shall also include a preventative mitigation measure analysis for the use of automatic shutdown valves per DOT Part 192.935(c) requirements. The O&M manual shall also incorporate all of the APMs.</p> <p>HAZ-2bvii—The applicant shall conduct an in-line inspection of the pipeline if the maximum allowable operating pressure (MAOP) creates a circumferential stress greater than 40% of the specified minimum yield strength (SMYS). The in-line inspection tool shall be capable of identifying pipe anomalies caused by internal and external corrosion and other causes of metal loss. The inspections shall be performed at regular intervals, in accordance with the applicant's integrity management program.</p> <p>HAZ-2bviii—The following mitigation measures shall be incorporated into the project by the applicant:</p> <ul style="list-style-type: none"> • The minimum depth of cover for each of the pipeline segments shall be 6 feet. 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<ul style="list-style-type: none"> • 100% of the circumferential welds shall be inspected using radiographic techniques in accordance with API 1104. • A sectionalizing valve shall be provided on the pipeline segment between the wellhead site and the compressor station. • A control system and associated equipment shall be provided to facilitate ultra-fast closure of important safety valves, including those in the well field and on the pipeline segment between the well field and the compressor station. • During periods where there is no flowing gas, the block valves at each end of each pipeline segment shall be closed, to “shut in” the facilities. During non-operational periods, the pipeline segments shall be pressurized but shall be isolated from all natural gas sources. • All pipeline segments shall be designed to Class 4 (most conservative) area classification per 49 CFR 192. • <u>Structural analysis of the compressor station building shall be conducted to either demonstrate that the building shall contain an explosion if a gas leak were to occur within the building or that the building will be designed to prevent a buildup of gas in the building.</u> • <u>Body mass-sensitive intrusion alarms shall be installed at the compressor station and wellhead.</u> • <u>Multiple line-of-sight gas detectors couple to below</u> 			

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p><u>wellhead and process perimeter shutdown valves.</u></p> <ul style="list-style-type: none"> • <u>Pipeline leak detectors based on metered flow differences between the wellhead and compressor systems.</u> <p>HAZ-2bix—An integrity management program for HCA portions of the pipeline shall also be prepared in accordance with 49 CFR 192, Subpart O. The integrity management program shall be submitted to DOT and CPUC.</p> <p>The following project components shall implement the following measures:</p> <ul style="list-style-type: none"> • Wellhead site (HAZ-2bii–HAZ-2bvii) • Compressor station (HAZ 2bi) • Pipelines 1 and 2 (HAZ-2bi–HAZ-2bix). 			
HAZ-6	Construction of the Proposed Project will be partially within grassland areas, which may be prone to fire during portions of the year.	HAZ-6	—	SNGS, LLC shall prepare a fire protection plan that shall be approved by the City of Sacramento Fire Department during the prior to construction of the facilities. This plan shall include procedures to reduce the potential for creation of fires from welding and the provision of firefighting equipment and trained personnel to put out any fire that may be ignited.	SNGS, LLC to implement measure as defined.	Fire protection plan to be approved by the City of Sacramento Fire Department. SNGS, LLC to provide verification to CPUC.	During construction within grassland areas of project facilities.
H-1	Water quality degradation from erosion and sedimentation during construction.	—	1	See APM 1 described previously in this table.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of measure including submittal of construction contract.	Prior to construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
H-1	Water quality degradation from erosion and sedimentation during construction.	—	2	See APM 2 described previously in this table.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of worker training program and compliance with measure as defined.	Prior to construction.
H-1	Water quality degradation from erosion and sedimentation during construction.	—	14	SNGS, LLC would prepare an erosion and sediment control plan and a post-construction erosion and sediment control plan that describes when, where, and how the site reclamation BMPs would be implemented. The City of Sacramento would review and approve these plans prior to construction.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to receive approval of plans from City of Sacramento. SNGS, LLC to provide verification to CPUC of measure, including submittal of construction contract.	Prior to issuance of grading permit.
H-2	Degradation of water quality through spill of potentially harmful materials used in construction.	—	7	<ul style="list-style-type: none"> • See APM 7 described previously in this table. 	SNGS, LLC to incorporate measure into construction contracts.	SNGS, LLC to provide verification to CPUC of measure, including submittal of construction contract.	Prior to issuance of grading permit.
H-2	Degradation of water quality through spill of potentially harmful materials used in construction.	—	12	The equipment used for the Proposed Project would require periodic maintenance and refueling. To reduce the potential of contamination by spills, no refueling, storage, servicing, or maintenance of equipment would be performed within 100 feet of sensitive environmental resources (e.g., seasonal wetlands and Morrison Creek). Additionally, all refueling or servicing would be done with absorbent material or drip pans underneath equipment to contain spilled fuel or fluids. Any fluids drained from the machinery during servicing would be collected in leak-proof containers and	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of measure, including submittal of construction contract.	During construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>taken to an appropriate disposal or recycling facility. If such activities result in spillage or accumulation of a product on the soil, the contaminated soil would be assessed and disposed of properly. Under no circumstances would contaminated soils be added to a spoils pile.</p> <p>Mobile refueling trucks likely would be used for on-site refueling of stationary construction equipment. The refueling trucks would be independently licensed and regulated to haul and dispense fuels and to ensure that the appropriate spill prevention techniques are implemented. All maintenance materials (i.e., oils, grease, lubricants, antifreeze, and similar materials) would be stored in a designated storage area, away from site activities and more than 100 feet from sensitive resources. During construction, all vehicles and equipment required on site would be parked or stored at least 100 feet from waterbodies, wetlands, and other sensitive resource areas. These areas would be identified on the construction drawings, as appropriate. All wash-down activities would be conducted at least 100 feet from sensitive environmental resources.</p>			
H-2 and H-3	Degradation to water quality through spill of potentially harmful materials and impacts to surface waters.	—	8	See APM 8 described previously in this table.	<p>SNGS, LLC to prepare a Hazardous Materials Contingency Plan.</p> <p>SNGS, LLC to require project contractor to prepare an HSP.</p>	<p>CPUC and the City of Sacramento to review Hazardous Materials Contingency Plan and HSP to ensure compliance with measure.</p>	<p>Hazardous Materials Contingency Plan: Prior to grading permit issuance.</p> <p>HSP: Prior to construction.</p>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
H-3	Impacts to surface waters.	—	16	SNGS, LLC would prepare a Bore Plan and Frac-Out Contingency Plan that would both reduce the potential for a frac-out to occur and minimize any negative impact should a frac-out occur. The plan will include specific measures for monitoring frac-out, containing drilling mud, and notifying agency personnel. The plan will be submitted to CPUC and agencies with jurisdiction prior to HDD activities. The contractor will be responsible for hauling and the disposal of all waste drilling fluid at an approved location.	SNGS, LLC to prepare Bore Plan and Frac-Out Contingency Plan. The contractor will be responsible to haul and dispose of all waste drilling fluid at an approved location.	SNGS, LLC to receive approval of plans from CPUC and agencies with jurisdiction.	Prior to construction.
H-3	Impacts to surface waters: an inadvertent release of drilling mud (frac-out) during the HDD under Morrison Creek could result in sedimentation and turbidity to nearby water resources.	H-3a	—	<p>Creek crossings shall be conducted in a manner that does not result in a sediment-laden discharge or hazardous materials release to the waterbody. The following measures shall be implemented during horizontal boring (jack and bore) operations:</p> <ol style="list-style-type: none"> (1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. (2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary for Morrison Creek. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). (3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. 	SNGS, LLC shall require contractor to comply with measures. Prior to construction, SNGS, LLC to consult with <u>Central Valley Regional Water Quality Control Board (CVRWQCB)</u> to determine if individual dewatering permit is required. If necessary, SNGS, LLC to implement dewatering drawing during dewatering activities.	Proof of the obtainment of necessary permits shall be provided to the CPUC.	SNGS, LLC to consult with CVRWQCB prior to construction. SNGS, LLC to receive assurance that compliance of Mitigation Measure H-3a will be followed prior to initiation of construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>(4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion and temporary sediment barriers left in place until restoration is deemed successful.</p> <p>(5) SNGS, LLC shall obtain the required permits prior to conducting work associated with HDD activities and provide proof to CPUC. Required permits may include ACOE CWA Section 404, RWQCB CWA 401, and CDFG Streambed Alteration Agreement 1602. SNGS, LLC shall implement all pre- and post-construction conditions identified in the permits issued for HDD activities.</p>			
H-3	Impacts to surface waters: an inadvertent release of drilling mud (frac-out) during the HDD under Morrison Creek could result in sedimentation and turbidity to nearby water resources.	H-3b	—	<p>(1) Prior to construction, SNGS, LLC shall consult with the CVRWQCB to determine if an individual discharge permit is required for dewatering at any of the project sites anticipated to encounter groundwater. A copy of the permit or a waiver from the RWQCB, if required, shall be provided to the CPUC prior to dewatering.</p> <p>(2) In addition, SNGS, LLC shall submit a typical dewatering drawing that shall be implemented during dewatering activities. The drawing shall include the location of pumps within secondary containment; fuel storage areas; anticipated discharge point; scour protection measures; intake hose screening; and monitoring procedures to ensure that hazardous materials spills are addressed in a timely manner and discharge hoses are frequently inspected for leaks.</p>	SNGS, LLC shall require contractor to comply with measures. Prior to construction, SNGS, LLC to consult with CVRWQCB to determine if individual dewatering permit is required. If necessary, SNGS, LLC to implement dewatering drawing during dewatering activities.	Proof of the obtainment of necessary permits shall be provided to the CPUC.	SNGS, LLC to consult with CVRWQCB prior to construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
H-4	Construction of the wellhead site and compressor station would increase the total impervious areas at each location, which would increase runoff and alter existing drainage patterns.	H-4a	—	<p>SNGS, LLC shall prepare a drainage study and shed map as described in Section 11.7 of the City of Sacramento's Design and Procedures Manual. The drainage study shall include an overland flow release map for the Proposed Project. Sufficient off-site and on-site spot elevations shall be provided in the drainage study to determine the direction of the storm drain runoff. The Department of Utilities shall approve this study and shed map. The on-site storm drain system shall be sized per the latest design runoff standards. Prior to design, SNGS, LLC will contact the Department of Utilities for the design criteria.</p> <p>The building pad elevations for the wellhead and compressor station sites shall be approved by the Department of Utilities and shall be a minimum of 1.7 feet above the local controlling overland release elevation or the finished floor elevation, or the finished floor elevation shall be a minimum of 1.7 feet above the local controlling overland flow release elevation, whichever is higher.</p>	SNGS, LLC to prepare drainage plan and implement mitigation measure as defined.	SNGS, LLC to provide drainage and grading plans to the City of Sacramento for approval. SNGS, LLC to provide CPUC verification of compliance with measure.	Prior to issuance of grading permit.
H-4	Construction of the wellhead site and compressor station would increase the total impervious areas at each location, which would increase runoff and alter existing drainage patterns.	H-4b	—	<p>SNGS, LLC shall comply with the City of Sacramento's Grading, Erosion, and Sediment Control Ordinance. This ordinance requires the applicant to prepare erosion and sediment control plans for both during and after construction of the Proposed Project and to prepare preliminary and final grading plans and plans to control urban runoff pollution from the project site during construction.</p> <p>This project is greater than 1 acre in size; therefore, SNGS, LLC is required to comply with the state's NPDES General Permit for Stormwater Discharges Associated with Construction Activity (General Permit). To comply with the General Permit, SNGS, LLC will need to file a <u>Notice of</u></p>	SNGS, LLC to prepare drainage plan and implement mitigation measure as defined.	SNGS, LLC to provide drainage and grading plans to the City of Sacramento for approval. SNGS, LLC to provide CPUC verification of compliance with measure.	Prior to issuance of grading permit.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p><u>Intent</u> (NOI) with the <u>State Water Resources Control Board</u> (SWRCB) and prepare a <u>Stormwater Pollution Prevention Plan</u> (SWPPP) prior to construction. The SWPPP will be reviewed by the Department of Utilities prior to issuing a grading permit. The following items shall be included in the SWPPP: (1) vicinity map, (2) site map, (3) list of potential pollutant sources, (4) type and location of erosion and sediment BMPs, (5) name and phone number of person responsible for SWPPP, and (6) certification by property owner or authorized representative.</p>			
H-5	<p>Drilling at the wellhead site could impact the quality of the on-site aquifer. Construction of pipeline segments one and two may create potential significant impacts to groundwater during HDD of Morrison Creek.</p>	H-5a -H-5c	—	<p>H-5a: SNGS, LLC and its contractors shall comply with all local, state, and federal regulations pertaining to stormwater and non-stormwater discharges.</p> <p>H-5b SNGS, LLC and its contractors shall use non-toxic drilling muds during the drilling of the wells within the areas above the shale cap. <u>Any contaminated drilling mud shall be disposed of at an approved facility.</u></p> <p>H-5c: If groundwater is encountered during the pipeline trenching or HDD, the site shall be dewatered prior to continuing construction. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.</p>	<p>SNGS, LLC shall ensure that contractors comply with applicable local, state, and federal regulations regarding stormwater and non-stormwater discharges. Additionally, SNGS, LLC to consult with CVRWQCB to determine if an individual discharge permit is required for dewatering at any of the project sites.</p>	<p>SNGS, LLC to provide CPUC and City of Sacramento with documentation of compliance with regulations regarding stormwater and non-stormwater discharges. SNGS, LLC to ensure contractors use non-toxic drilling muds during well drilling. SNGS, LLC must obtain a NPDES permit for the proper disposal of water (if dewatering is required).</p>	<p>Prior to construction. If required, typical dewatering drawing to be implemented prior to dewatering activities.</p>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
H-6	The location of the compressor station is within the 100-year floodplain zone and, when complete, the station could be damaged during a flood event.	H-4a	—	See Mitigation Measure H-4a described in this table, which requires preparation of a site drainage plan.	SNGS, LLC to prepare drainage plan and implement mitigation measure as defined.	SNGS, LLC to provide drainage and grading plans to the City of Sacramento for approval. SNGS, LLC to provide CPUC verification of compliance with measure.	Prior to issuance of grading permit.
H-8	Operation and maintenance impacts to surface water and groundwater.	—	5	See APM 5 previously described in this table.	SNGS, LLC to implement measure as defined and incorporate commitments into construction contracts.	SNGS, LLC to obtain approval from DOGGR and provide verification to CPUC of compliance with measure.	Prior to drilling of wells.
H-8	Implementation of the Proposed Project will present the potential for contamination of the groundwater aquifer through the storage of natural gas. Of concern would be the contamination of the aquifer through migration of gas into the aquifer.	H-8a	—	H-8a: SNGS, LLC shall prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan in accordance with 40 CFR 112. A copy of the plan shall be submitted to the CPUC prior to project start-up.	SNGS, LLC to implement measure as defined and incorporate commitments into construction contracts.	SNGS, LLC to submit a copy of SPCC Plan to the CPUC prior to project start-up.	SPCC Plan developed prior to project start-up.
H-8	Implementation of the Proposed Project will present the potential	H-8b	—	SNGS, LLC shall develop groundwater monitoring wells at the wellhead site. These should be in place and a groundwater quality baseline developed prior to any drilling	SNGS, LLC to implement measure as defined and	SNGS, LLC to monitor groundwater.	Groundwater monitoring at the wellhead site

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
	for contamination of the groundwater aquifer through the storage of natural gas. Of concern would be the contamination of the aquifer through migration of gas into the aquifer.			activities. Groundwater quality shall be monitored in both the shallow and deeper aquifers. In the event that hydrocarbon levels above baseline are detected, gas storage activities shall be suspended and the reservoir allowed to depressurize until the source of this contamination is found and corrected. Remediation may also be required if hydrocarbons contaminate the water column. <u>Potential remediation methods shall also be identified.</u> Because the duration of this impact and the effectiveness of this mitigation measure—specifically remediation, if required—are not known, the impact remains significant and unavoidable. <u>The plan shall be reviewed by both DOGGR and the RWQCB.</u>	incorporate commitments into construction contracts.		during operations.
LU-3	Construction of the Proposed Project could cause interruptions to traffic and disruptions to established land uses due to HDD operations, lane closures, and interferences with local transit services.	LU-3a	—	<p>SNGS, LLC or its construction contractor shall provide advanced notice, between 2 and 4 weeks prior to construction, by mail to all residents or property owners within 300 feet of the Proposed Project. The announcement shall state specifically where and when construction will occur in the area. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. SNGS, LLC shall also publish a notice of impending construction in local newspapers, stating when and where construction will occur. Prior to construction, copies of all notices shall be submitted to the CPUC.</p> <p>SNGS, LLC shall construct during the night in areas where a local jurisdiction requests such timing to reduce construction disruption, if it can be demonstrated that significant noise impacts would not occur. Whether requested by either SNGS, LLC or the local jurisdiction, SNGS, LLC shall provide written evidence of local</p>	SNGS, LLC shall conduct public notification as defined.	SNGS, LLC to provide CPUC with construction notices for review and approval at least 60 days prior to construction. Notices to provide advanced notice of construction activities in order to limit noise, dust, and disruption impacts.	Prior to and during construction for all residences and property owners within 300 feet of the project alignment.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				jurisdiction approval to the CPUC prior to the start of any night work. SNGS, LLC shall also provide analysis of noise impacts and proposed mitigation measures for any residents or other sensitive land uses that would be affected by nighttime construction.			
LU-3	Construction of the Proposed Project could cause interruptions to traffic and disruptions to established land uses due to HDD operations, lane closures, and interferences with local transit services.	LU-3b	—	SNGS, LLC shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with Mitigation Measure LU-3a. SNGS, LLC shall also establish a telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures shall be submitted to the CPUC for review and approval prior to construction and bi-monthly reports summarizing public concerns shall be provided to the CPUC during construction.	SNGS, LLC to provide public liaison and telephone number.	SNGS, LLC to provide procedures and bimonthly report to CPUC for review and approval prior to and during construction, and provide evidence to CPUC that a liaison person has been identified to address public concerns.	Prior to and during construction for all residences and property owners within 300 feet of the project alignment. A public liaison shall be provided to respond to construction concerns.
N-1	Construction activities would temporarily increase local noise levels.	N-1a	—	SNGS, LLC shall conduct construction activities between 7:00 a.m. and 6:00 p.m. Monday through Saturday and 9:00 a.m. to 6:00 p.m. Sunday or for a shorter period if so stipulated in the relevant local noise ordinance. Exceptions shall only apply to drilling operations associated with the proposed wellhead and HDD construction.	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contracts.	SNGS, LLC to provide verification to CPUC of measure, including submittal of construction contract.	During construction.
N-1	Construction activities would temporarily increase local noise levels.	N-1b	—	SNGS, LLC shall install temporary noise barriers between well drilling and HDD equipment and sensitive receptors. Temporary noise barriers shall be installed between the drilling rig and nearby receptors such that noise levels at	SNGS, LLC to implement mitigation measure as defined.	SNGS, LLC to provide verification to CPUC of measure.	Prior to and during construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				nearby residences are reduced. Depending on the length of the noise barrier, it may need to be repositioned after drilling of each well has been completed and the drilling rig has been repositioned. The height and location of the noise barrier shall be determined based on the size of the drilling rig to be used and the location of the proposed wells, and shall be included in a drilling plan submitted to CPUC and the City of Sacramento for review and approval. Exceptions shall apply only upon approval by the city. It is estimated that the barriers will result in a 5 to 10 dBA attenuation, which may still result in nighttime noise impacts.			
N-1	Construction activities would temporarily increase local noise levels.	N-1c	—	SNGS, LLC or its construction contractor shall provide advanced notice, between 2 and 4 weeks prior to construction, by mail to all sensitive receptors and residences within 300 feet of construction sites, staging areas, and access roads. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail. Notices shall provide tips on reducing noise intrusion; for example, by closing windows facing the planned construction. The notice shall also advise the recipient on how to inform the applicant/contractor if specific noise- or vibration-sensitive activities are scheduled so that construction can be rescheduled, if necessary, to avoid a conflict. SNGS, LLC shall also publish a notice of impending construction in local newspapers, stating when and where construction will occur. Prior to public notification, copies of all notices shall be submitted to the CPUC for review and approval.	SNGS, LLC to implement mitigation measure as defined.	SNGS, LLC to provide verification to CPUC of measure.	Prior to construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
N-1	Construction activities would temporarily increase local noise levels.	N-1d	—	SNGS, LLC shall identify and provide a public liaison before and during construction to respond to concerns of neighboring receptors, including residents, about noise construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with Mitigation Measure N-1c. SNGS, LLC shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. Prior to public notification, procedures included in the notices shall be submitted to the CPUC for review and approval. SNGS, LLC shall provide to the CPUC a bimonthly letter reporting the number of calls received and a summary of caller concerns and how concerns were addressed.	SNGS, LLC to implement mitigation measure as defined.	SNGS, LLC to provide verification to CPUC of measure.	Prior to and during construction.
N-1	Construction activities would temporarily increase local noise levels.	N-1e	—	Construction equipment, excluding HDD drilling equipment, shall be equipped with the appropriate mufflers to reduce noise impacts.	SNGS, LLC to implement mitigation measure as defined.	SNGS, LLC to provide verification to CPUC of measure.	During construction.
U-1	Construction of the Proposed Project could potentially impact existing public utilities.	U-1a	—	Prior to construction in which a utility service interruption is known to be unavoidable, SNGS, LLC shall notify members of the public affected by the planned outage of the impending interruption. Copies of the notices and dates shall be provided to the CPUC at the time the notices are distributed to the public and to the City of Sacramento Fire Department.	SNGS, LLC shall notify service providers in the vicinity of the project components and pipeline route. SNGS, LLC to implement measure as identified.	SNGS, LLC to provide the Sacramento Fire Department (SFD) with copies of notices/dates of any public utility interruptions that may impact its ability to provide fire service.	Prior to construction activities in which a utility service interruption is known to be unavoidable.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
U-1	Construction of the Proposed Project could potentially impact existing public utilities.	U-1b	—	Underground Service Alert shall be notified a minimum of 48 hours in advance of earth-disturbing activities in order to identify buried utilities. After probing the corridor for existing utilities, exact placement of the connecting pipeline(s) shall be determined so that placement of new structures will not conflict with other co-located utilities.	SNGS, LLC to implement measure as defined. SNGS, LLC to incorporate measure into construction contract.	SNGS, LLC to provide CPUC with verification of coordination efforts. CPUC to verify to ensure that exiting underground utilities are protected from disturbance during construction.	Prior to construction in all work areas requiring excavation.
U-1	Construction of the Proposed Project could potentially impact existing public utilities.	U-1c	—	<p>During project design, SNGS, LLC shall coordinate with each jurisdiction affected by the underground pipeline segments to determine the exact location for placement of the structures pipelines to avoid conflicts with planned and proposed utility projects and any relocation of existing utilities occurring within the direct vicinity of the project.</p> <p>Coordination with the following jurisdictional departments shall occur in conjunction with final design of the underground natural gas pipelines:</p> <ul style="list-style-type: none"> • City of Sacramento Development Services • City of Sacramento Department of Utilities • Applicable phone, cable, and fiber-optic companies • Applicable natural gas and energy companies • Sacramento County Water Agency. <p>Documentation of coordinating efforts and local jurisdiction approval of final design plans for the underground pipelines shall be provided to the CPUC prior to the start of construction activities.</p>	SNGS, LLC to submit final design plans to the City of Sacramento for review and comment.	CPUC to verify local jurisdiction review and incorporation of comments to ensure that underground construction avoids conflicts with planned/proposed utilities.	Prior to construction in all areas proposed for underground pipelines.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
U-1	Construction of the Proposed Project could potentially impact existing public utilities.	U-1d	—	<p>Prior to construction of the underground pipelines, SNGS, LLC shall submit to the CPUC written documentation demonstrating coordination with the appropriate jurisdictions, including the following:</p> <ol style="list-style-type: none"> (1) Construction plans designed to protect existing utilities and showing the dimensions and location of the finalized alignment; (2) Records that the applicant provided the plans to affected jurisdiction for review, revision, and final approval; (3) Evidence that the project meets all necessary local requirements; (4) Evidence of compliance with design standards; (5) Copies of any necessary permits, agreements, or condition of approval; (6) Records of any discretionary decisions made by the appropriate agencies. 	SNGS, LLC to submit final design plans to the City of Sacramento for review and comment.	CPUC to verify local jurisdiction review and incorporation of comments to ensure that underground utilities are protected from disturbance during construction.	Prior to construction in all areas where underground pipelines will be installed.
U-1	Construction of the Proposed Project could potentially impact existing public utilities.	U-1e	—	SNGS, LLC shall evaluate the potential for the underground pipelines to increase corrosion on existing pipelines. If this potential is determined to exist, SNGS, LLC shall be responsible for installation of the required cathodic protection systems that would reduce corrosion potential. A letter documenting these consultations and their results, including concurrence by the affected jurisdiction(s) and other companies, shall be provided to the CPUC prior to the start of construction.	SNGS, LLC to submit final design plans to the City of Sacramento for review and comment.	CPUC to verify local jurisdiction review and incorporation of comments to ensure that underground pipelines do not cause corrosion in nearby existing pipes.	Prior to construction in all areas where underground pipelines will be installed.
U-2	The Proposed Project could place increased demand on	U-2	—	SNGS, LLC shall coordinate with the City of Sacramento and reimburse the city for their fair share of additional equipment and personnel as determined by the city's needs	SNGS, LLC to coordinate with the City of Sacramento.	SNGS, LLC to provide CPUC with verification of	Prior to grading permit issuance.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
	fire and police protection services.			study. The department is contracting with technical experts to evaluate the capabilities of the department and surrounding public and private infrastructure for the purpose of identifying areas requiring mitigation. Once identified, mitigating action costs, both one-time and recurring, are to be borne by SNGS, LLC. Additionally, SNGS, LLC's Emergency Response Plan shall have provisions to reimburse the City of Sacramento for any costs of responding to an emergency, as well as damage caused by a project-related incident. The Emergency Response Plan shall be submitted to the SFD for review and approval prior to construction.		coordination efforts with the City of Sacramento.	
U-2	The Proposed Project could place increased demand on fire and police protection services.	—	9	See APM 9 described previously in this table.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contract.	SNGS, LLC shall provide the Emergency Response Plan to SFD (Assistant Chief Troy Malaspino and Assistant Chief Ed Vasques) for review/approval prior to construction. SNGS, LLC to provide verification to CPUC of measure including submittal of Emergency Response Plan.	Prior to construction.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
U-3	Dewatering discharge into a sanitary sewer system if other dewatering processes do not meet local water quality requirements.	U-3	—	Prior to discharging any water into a local wastewater pipeline or facility, SNGS, LLC shall contact the City of Sacramento and Sacramento Regional County Sanitation District for approval. All discharges shall be in accordance with all local, state, and federal regulations pertaining to wastewater disposal.	SNGS, LLC to implement mitigation measure as defined and incorporate commitments into construction contract.	SNGS, LLC to provide verification to CPUC of approval from City of Sacramento and Sacramento Regional County Sanitation District.	Prior to discharging any water into a local wastewater pipeline or facility.
T-1	Road and lane closures.	—	11	<p>SNGS, LLC would prepare a traffic control plan to minimize short-term construction-related impacts on local traffic. The plan would be submitted for review and approval by the City of Sacramento Director of Transportation and would include the following:</p> <ul style="list-style-type: none"> • A diagram showing the location of the proposed work area • A diagram showing the locations of areas where public ROWs may be closed or obstructed • A diagram showing the placement of traffic control devices • The proposed phasing of traffic control • Times when traffic control would be in effect • Times when demolition/construction activities would prohibit access to private property from a public ROW • A statement that the applicant shall comply with the City of Sacramento's noise ordinance during the performance of all work • A statement that the applicant understands that the plan may be modified by the director at any time in 	SNGS, LLC to prepare traffic control plan.	SNGS, LLC will obtain approval of traffic control plan from City of Sacramento Department of Transportation Director.	Prior to issuance of grading permit.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p style="text-align: center;">order to eliminate or avoid traffic conditions that are hazardous to the safety of the public.</p> <p>The plan would clearly define the location, timing, and types of interferences that could block public ROW and emergency access. The plan also allows the Department of Transportation Director or Director of Utilities to modify, suspend, or stop the plan if a potential public safety hazard would result.</p>			
T-1	Road and lane closures.	T-1a	—	<p>Prior to the start of construction, SNGS, LLC shall submit a Traffic Control Plan (TCP) to the City of Sacramento and the SFD. The city has jurisdiction over public roads that would be affected by underground construction activities as part of the required traffic encroachment permits. The public roadways that may be affected by construction activities are Power Inn Road, Junipero Street, Caroline Drive, and Fruitridge Road. The TCP shall define the locations of all roads that would need to be temporarily closed due to construction activities, including hauling of oversized loads by trucks and trenching activities (pursuant to SMC <u>Sacramento City Code</u> Section 12.16.020, temporary street closures require a permit from the city manager (<u>Sacramento, City of 2000</u>)). Input and approval from the City of Sacramento and SFD shall be obtained and copies of approval letters from each jurisdiction must be provided to the CPUC prior to the start of construction within the jurisdiction. The TCP shall define the use of flag persons, warning signs, lights, barricades, and cones according to standard guidelines outlined in the Caltrans <i>Construction Manual</i> (2007), the <i>Standard Specifications for Public Works Construction</i> (Public Works Standards 2006), and the <i>Work Area Traffic Control Handbook (WATCH)</i></p>	SNGS, LLC to prepare TCP as defined.	SNGS, LLC will provide documentation of coordination efforts with affected public jurisdictions as discussed in the measures and SNGS, LLC will conform to all required conditions to ensure traffic flows will be generally maintained without severe congestion.	Prior to and during construction for all locations where temporary road or lane closures will be required.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				(American Public Works Association 2006). Documentation of the approval of these plans and the issuance of encroachment permits (if applicable) shall be provided to the CPUC prior to the start of construction activities that require temporary closure of a public roadway.			
T-1	Road and lane closures.	T-1b	—	SNGS, LLC shall restrict all necessary lane closures or obstructions on major roadways associated with underground construction activities to off-peak periods in urbanized areas in order to mitigate traffic congestion and delays. Lane closures in urbanized areas must not occur between 6:00 a.m. and 9:30 a.m. and between 3:30 p.m. and 6:30 p.m., or as directed in writing by the affected public agencies. All trenching activities within the City of Sacramento shall comply with SMC Section 12.12.070: “No trench shall be opened in any street for the purpose of laying pipes, conduits or ducts more than four hundred (400) feet in advance of the pipe, conduit, or ducts being placed in the trench, except when the prior written consent of the director has been obtained” (2000).	SNGS, LLC to prepare TCP as defined.	SNGS, LLC will provide documentation of coordination efforts with affected public jurisdictions as discussed in the measures and SNGS, LLC will comply with all required conditions to ensure traffic flows will be generally maintained without severe congestion.	Prior to and during construction for all locations where temporary road or lane closures will be required.
T-2	Construction-generated traffic.	T-2	—	The TCP described under Mitigation Measure T-1a shall also provide measures to ensure that traffic congestion and delay resulting from project construction are minimized by incorporating features such as: <ul style="list-style-type: none"> • Staggered Shift Hours. During the peak period of construction activity, construction shifts shall be staggered to the degree possible, such that employee arrivals and departures from the site will avoid the local roadway peak hours (7:30–8:30 a.m. and 4:30–5:30 p.m.) in the project vicinity. In order 	SNGS, LLC to implement measure. SNGS, LLC to incorporate measure into construction contracts.	SNGS, LLC will provide documentation of compliance with measure.	During construction of the Proposed Project.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<p>to minimize potential impacts to Fruitridge Road during the proposed tie-in to SMUD Line 700, construction activities shall occur during off-peak nighttime hours. Trench plates shall be used to facilitate daytime traffic operations. However, pursuant to SMC Section 12.20.040, trench plates shall not be utilized for more than 3 calendar days in any location (2000).</p> <ul style="list-style-type: none"> • Truck Scheduling. Construction-related truck traffic shall be scheduled to avoid travel during peak periods of traffic on the surrounding roadways. Similarly, delivery of required piping and construction materials shall be coordinated to avoid delivery during peak periods of traffic. 			
T-3	Physical impacts to roads and sidewalks.	T-3	—	<p>If damage to roads, sidewalks, and/or medians occurs, SNGS, LLC shall coordinate repairs with the affected public agencies to ensure that any damage is adequately repaired. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regarding and reconstructing roads to drain properly. Said measures shall be incorporated in an access agreement/easement with the applicable governing agency prior to construction.</p> <p>Underground trenching activities in roadways shall require returning the affected roadways to previous conditions, pursuant to the affected jurisdiction's encroachment permits and franchise agreements.</p>	SNGS, LLC to implement measure. SNGS, LLC to incorporate measure into construction contracts.	SNGS, LLC will provide documentation of coordination efforts with affected public jurisdictions and SNGS, LLC will comply with all required conditions to ensure that restoration/maintenance of roads to pre-construction conditions is carried out as determined by the affected public agency.	After construction is completed on each affected roadway used to access the construction sites and roads in which trenching is required.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
T-5	Interference with pedestrian and bicycle circulation and safety.	T-5	—	Where construction would result in temporary closures of sidewalks and other pedestrian facilities, SNGS, LLC shall provide temporary pedestrian access through alternative routes avoiding the construction areas. Affected pedestrian facilities and the alternative facilities or detours to be provided shall be identified in the TCP. Where construction activity will result in bike route or bike path closures, appropriate detours and signs shall be provided. Where construction will affect bicycle travel on streets without bicycle facilities, requirements for plates to cover trenches will be adhered to, in accordance with the permit requirements of the local jurisdiction.	SNGS, LLC to implement and incorporate measure into construction contracts.	SNGS, LLC will provide documentation of coordination efforts with affected public jurisdictions and will comply with all required conditions to ensure that pedestrian and bicycle circulation will not be disrupted.	Prior to and during construction where sidewalk and bicycle lane closures are expected.
T-6	Construction would interfere with emergency response.	T-6	—	SNGS, LLC shall coordinate in advance with local jurisdictions to avoid restricting movements of emergency vehicles. SNGS, LLC shall request that police departments, fire departments, ambulance services, and paramedic services be notified in advance by each jurisdiction of the proposed locations, nature, timing, and duration of the construction activities and advised of any access restriction that could negatively affect their emergency response times. If necessary, SNGS, LLC shall assist local jurisdictions to ensure that such emergency services are informed of the previously mentioned kinds of logistics related to its construction activities. If project construction will block access to nearby property, provisions shall be ready at these locations at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. TCP (Mitigation Measure T-1a) will include details regarding coordination of emergency services and <u>will</u> identify procedures to ensure effectiveness of emergency services along project area roadways.	SNGS, LLC to implement measure. SNGS, LLC to incorporate measure into construction contracts.	SNGS, LLC will provide documentation of coordination efforts with affected public jurisdictions and will comply with all required conditions to ensure that construction activities will not preclude emergency vehicle access.	Prior to and during construction for all locations where temporary road or lane closures are required.

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
T-9	Restricted access to properties.	T-9a	—	SNGS, LLC will notify affected parties of potential obstructions to access and shall make provisions for alternative access. Alternative access provisions will be provided by SNGS, LLC where feasible, with guide signs to inform the affected parties and the public. SNGS, LLC will give written notification to all landowners along the ROW of the construction schedule, and shall explain the exact location and duration of construction activities proposed for the wellhead site, compressor station, and pipeline alignment route and construction activities within each street (i.e.g., which lanes will be temporarily closed, at what times of the day, and on what dates). SNGS, LLC shall identify locations of any potential access obstruction, and shall make alternative access provisions. Written notification shall include telephone numbers for SNGS, LLC's public relations liaison and shall encourage affected parties to voice their concerns with SNGS, LLC prior to the start of construction activities so that individual problems and solutions may be identified. Alternative access provisions shall include SNGS, LLC-provided signage and, if necessary, alternative parking as provided and approved by local agencies, as well as open trenches to be covered during periods of inactivity with steel plates in order to provide maximum weight allowance for anticipated traffic.	SNGS, LLC to implement measure.	SNGS, LLC will provide documentation of coordination efforts with affected parties and will comply with all required conditions to ensure access will be maintained.	Prior to construction or prior to activities that would obstruct access to property. SNGS, LLC shall notify affected parties who would experience access obstruction.
T-9	Restricted access to properties.	T-9b	—	SNGS, LLC shall schedule construction so that at least one access driveway of affected businesses is left unblocked during all business hours or hours of use. This scheduling shall be provided by SNGS, LLC to the affected tenants so that they can inform employees.	SNGS, LLC to implement and incorporate measure into construction contracts.	SNGS, LLC will provide documentation of coordination efforts with affected parties and will comply with all required	Prior to construction or prior to activities that would obstruct access to affected businesses. SNGS, LLC shall

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
						conditions to ensure access to businesses will be maintained.	notify affected tenants who would experience access obstruction.
V-1	Nighttime lighting during 24/7 drilling activities.	V-1	—	Site lighting shall be hooded and directed toward the interior of the wellhead, compressor station, and HDD drilling locations.	SNGS, LLC to implement measure as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications. CPUC to inspect periodically to ensure correct placement of lighting to prevent night lighting impacts so sensitive receptors.	Prior to and during construction.
V-2	Long-term visual impacts of wellhead site.	—	15	SNGS, LLC has proposed constructing a 10-foot perimeter wall surrounding the wellhead site along with landscaping along Power Inn Road and Junipero Street to reduce visual impacts. Landscaping will consist of drought-tolerant plants, which will naturalize after irrigating for two or three growing seasons.	SNGS, LLC to implement APM as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contract specifications.	Prior to, during, and after construction.
<u>C-AQ-1</u>	<u>Release of methane, a greenhouse gas, from the compressor station</u>	<u>C-AQ-1</u>	<u>—</u>	<u>SNGS, LLC shall participate in the U.S. EPA's Natural Gas STAR Program. A memorandum of understanding (MOU) with the U.S. EPA shall be signed prior to initial startup of the compressor station. Within 6 months after signing the MOU, SNGS, LLC shall prepare an implementation plan that includes BMPs identified by the Natural Gas STAR program for transmission and distribution facilities. The implementation plan shall incorporate Partner Reported</u>	<u>SNGS, LLC to implement measure.</u>	<u>SNGS, LLC to sign MOU with U.S. EPA and submit. Implementation plan to the U.S. EPA. CPUC to ensure that SNGS, LLC has signed MOU and</u>	<u>MOU – prior to initial startup. Implementation plan – within 6 months after signing the MOU. Annual report – no later than January</u>

Table G-1 (Continued)

No.	Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
				<u>Opportunities that cost-effectively reduce methane emissions. After one calendar year of participation in the program, SNGS, LLC shall submit an annual report documenting the previous year's emission-reduction activities and corresponding methane emission reductions. Copies of all documents shall be submitted to the CPUC.</u>		<u>submitted an implementation plan.</u>	<u>31 of each year for the previous year's activities.</u>
<u>C-AQ-2</u>	<u>Greenhouse gases associated with electrical use and generation</u>	<u>C-AQ-2</u>	=	<u>SNGS, LLC shall enter into an agreement with SMUD to provide a minimum of 50% of the electricity used by the compressor station from renewable energy sources by participation in SMUD's Greenergy Program. A copy of the agreement shall be provided to CPUC.</u>	<u>SNGS, LLC to implement measure.</u>	<u>SNGS, LLC to provide documentation that it will participate in SMUD's Greenergy Program to CPUC.</u>	<u>Prior to the start of operation of the compressor station.</u>

Note: "=" indicates data is not applicable.

G.10 References

14 CCR 15000 et seq. CEQA (California Environmental Quality Act) Guidelines.

PRC (California Public Resources Code) 21081.6. California Public Resources Code, Section 21000 et seq. CEQA (California Environmental Quality Act).

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