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February 6, 2017

Kenneth A. Harris Jr.
State Oil and Gas Supervisor
Division of Oil, Gas, and Geothermal Resources
Department of Conservation
801 K Street, MS 18-05
Sacramento, CA 95814-3530

Dear Mr. Harris:

SUBJECT: PUBLIC HEALTH IMPLICATIONS OF FINDINGS FROM THE GAS STORAGE WELL SAFETY REVIEW AND PROPOSED PRESSURE LIMITS FOR THE ALISO CANYON STORAGE FACILITY

The Los Angeles County Department of Public Health (LADPH) appreciates the opportunity to comment on the findings from the Aliso Canyon Storage Facility safety review that the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (Division) conducted in accordance with Senate Bill 380 (SB 380).

The Division ordered that all 114 injection wells be thoroughly tested before injection resumes, and has reported that 35 wells have passed all of the safety and competence tests. Overall, the safety review conducted by the Division in coordination with independent experts, including Lawrence Livermore and Berkeley National Laboratories, was focused on an evaluation of well integrity. However, the safety review does not adequately address environmental and health threats that the injection of gas into Aliso Canyon Storage Facility poses to nearby communities. This review is missing critical information to determine community health and safety risks if Southern California Gas Company is allowed to start injecting gas into its Aliso Canyon Storage Facility:

- The safety review includes no results from the root-cause analysis. The root-cause analysis is expected to confirm the origin, mechanism, and nature of the leak that led to this community-

wide public health disaster. This analysis may provide key information to prevent the occurrence of a similar disaster. LADPH expects that the Division and California Public Utility Commission (CPUC) are fully committed to preventing another disaster or other adverse event at this field, and will therefore delay the decision to reinject at Aliso Canyon until after the root cause analysis is finalized.

- The safety review does not adequately address the need for continuous, comprehensive air monitoring for the complex network of wells, pipelines and related infrastructure at Aliso Canyon. It is vital to include best management practices, monitoring technologies, and reporting practices that the operator should have in place to closely monitor and evaluate the facility on a continuous basis. The 2016 Department of Energy (DOE) Task Force has reported that monitoring and leak detection practices were likely inadequate to maintain safe operations. DPH expects the root cause analysis findings to further inform this critically important monitoring plan for the facility.
- The safety review does not consider public health risk factors identified by the DOE Task Force in the evaluation of natural gas storage safety. These include geologic factors (e.g. seismic activity), potential for human error, and severe weather events. The Aliso Canyon field is situated on a geologic fault, therefore seismic activity must be anticipated, further evaluated, and incorporated into comprehensive risk management and emergency response plans.
- The safety review does not identify the chemical composition of the natural gas in the wells or reservoir. In the petrochemical industry, oil refineries routinely “fingerprint” oil mixtures. This practice should take place at Aliso Canyon. LADPH advises the Division to conduct fingerprinting analysis periodically for Aliso Canyon and other natural gas storage facilities, in order to understand potential impacts on public health.

LADPH has continuously responded to thousands of health-related impacts and ongoing recovery efforts since the natural gas disaster began in October 2015. Over 8,000 families were relocated from their homes, including many as far away as seven miles from the well failure. The attached graphic prepared by SoCalGas illustrates the location of relocated residents as a result of the Aliso Canyon leak (see attached). The primary reason for relocation was to gain relief from daily exposures to noxious odors. An equally important reason was the uncertainty associated with magnitude and duration of exposures from the Aliso Canyon field. The extremely large number of people impacted by the Aliso Canyon disaster was unprecedented in the experience of LADPH. Never before have so many people had to be relocated in the County due to an industrial disaster. Indeed, this was the largest natural gas leak in the history of the United States.

LADPH understands that some residents may have experienced exposure to natural gas odors for several years prior to this disaster. Reported and confirmed natural gas-type odors continue to this day in Porter Ranch, with the most recent recorded occurrence on January 17, 2017. These events continue to result in similar symptom reporting experienced by residents during the original disaster, including nausea, headaches, bloody noses, and eye, nose, and throat irritation. Therefore, in addition to the aforementioned data gaps, LADPH advises the Division and CPUC to conduct a thorough assessment of the environmental and health threats and continue to hold the operator responsible for future environmental and health assessment.

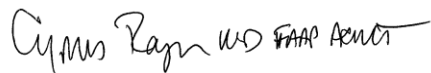
LADPH attended the community meetings held in Woodland Hills on February 1 and 2, 2017. Many of the health symptoms reported by residents during the public meeting were consistent with resident

complaints received by LADPH. After addressing the community and CPUC and DOGGR officials at these meetings, LADPH formally submits the following requests:

1. CPUC and DOGGR should postpone indefinitely the decision to resume injection operations at Aliso Canyon to allow time for the root cause analysis to be completed and for the other issues in this letter to be addressed.
2. CPUC and DOGGR should complete and publish the root-cause analysis, allowing sufficient time for pertinent agencies to review and comment on its findings.
3. CPUC and DOGGR should require Southern California Gas Company to commit to a comprehensive, community health study to the scope and specifications approved by LADPH, AQMD, and an independent panel of scientific agencies and experts.

We request a written response to this letter. Thank you for this opportunity to inform you of important public health issues that must be resolved before a decision is made regarding future operations at the Aliso Canyon field. Please do not hesitate to contact us to discuss.

Sincerely,

A handwritten signature in black ink that reads "Cyrus Rangan M.D. FAAP FACMT". The signature is written in a cursive style with some capital letters.

Cyrus Rangan M.D., FAAP, FACMT

Attachment

