

**SOUTHERN CALIFORNIA GAS COMPANY  
CALIFORNIA PUBLIC UTILITIES COMMISSION  
DATA REQUEST DATED MAY 1, 2017**

**RESPONSE DATED MAY 22, 2017**

SoCalGas provides the following response to the California Public Utilities Commission's May 1, 2017 request for information. This response is based upon the best available non-privileged responsive information that SoCalGas was able to locate through a diligent search within the time allotted to respond to this request. SoCalGas continues to search for and compile documentation responsive to this request and will update/supplement this response as SoCalGas' investigation continues, and additional information becomes available.

**Question 1:**

What was the composition (e.g., identification and proportion of various constituents) of the gas and fluids that were released during the October 23, 2015 leak at well SS-25 at the Aliso Canyon facility?

**Response 1:**

A. Natural Gas

The chemical composition of the natural gas in the Aliso Canyon storage facility is approximately 94% methane, 4% ethane, 1% carbon dioxide, and the remaining 1% is comprised of nitrogen, butane, pentane, propane, C6+ and related hydrocarbons. Note that odorant is added to the natural gas being stored at Aliso Canyon. The odorant includes tertiary-butyl mercaptan, tetrahydrothiophene, and methyl mercaptan.<sup>1</sup>

B. Well Control Treatments

See the attached table which provides data pertaining to the well control treatments performed at well SS-25 between October 24, 2015 and February 11, 2016 (*see* AC\_CPUC\_0130169).

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<sup>1</sup> Most natural gas entering the SoCalGas system from the interstate gas pipeline network already contains naturally occurring odorous sulfur compounds and, depending on the specific delivery point and associated supplier, odorants added by suppliers. To determine if the odorant content from each gas supply is sufficient as required by the DOT requirements (49 CFR 192.625), SoCalGas uses sulfur analyzers at each of the border receipt points. When the concentration is too low, SoCalGas adds supplemental odorant to the gas supply. SoCalGas generally injects odorant in a 50/50 blend of tertiary Butyl Mercaptan (TBM) and tetrahydrothiophene (THT) (which is not a mercaptan). Odorant is introduced into natural gas using pneumatic-driven displacement pump odorizers, commonly referred to as odorant injection units, installed at interstate and intrastate gas supply receipt points, and storage fields withdrawal meter stations.

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C. Tracer Gas

As part of the research conducted by a third party to design the proposed methane capture system and quantify the methane released during the leak, a tracer gas (nitrogen oxide) was released in close proximity to SS-25.

**Question 2:**

What is the composition (e.g., identification and proportion of the various constituents) of the gas after a standard operational withdrawal from each well at the underground storage facility or facilities you operate?

**Response 2:**

For the chemical composition of the natural gas at Aliso Canyon, please see Response 1.A. Analysis of the composition of the gas after a standard operational withdrawal from each well at the underground storage facilities SoCalGas operates is not available since such analysis is not conducted at each well. Gas composition from the other storage fields operated by SoCalGas is consistent with the gas composition data set forth in Response 1.A.