

## IV.G HAZARDS AND HAZARDOUS MATERIALS

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### A. INTRODUCTION

This section analyzes and discusses the project's potential environmental impacts related to hazards and hazardous materials, including analysis of surrounding uses that may be hazardous to the project site. The information contained in this section is derived from the *Phase I Environmental Site Assessment* ("Phase I ESA") prepared by Applied Environmental Technologies, Incorporated (AET); the *Fire/Vegetation Management Plan and Catastrophic Wildfire Risk Analysis* ("Fire Management Plan") prepared by Scott Franklin Consulting; and the *Potential Impacts of an Aliso Facility Gas Leak on the Proposed Hidden Creeks Site* study ("Gas Leak Study") prepared by Brownfield Subslab ("Brownfield") in April 2016. The Phase I ESA and Gas Leak Study are provided in **Appendix IV.G** of this EIR. The Fire Management Plan is provided in **Appendix L.2**.

At the time the original Draft EIR was prepared, the potential risk of upset from potential accidental releases of natural gas or other materials from the Aliso Canyon Natural Gas Storage Facility ("Aliso Canyon Facility") were determined to be less than significant based on the regulatory oversight and operating history of the facility.

This revised section provides information on the leak of natural gas from the Aliso Canyon Facility, operated by the Southern California Gas Company ("SoCalGas"), that occurred from October 2015 through February 2016 ("2015/2016 Leak"); the effects of this leak on the surrounding community and the project site; and the potential effects of any future accidental releases of natural gas or other materials from the Aliso Canyon Facility on the residential uses proposed for the project site.

### B. METHODOLOGY

The methodologies for analysis of the potential for hazards and hazardous materials to be present or created by the project are described below.

#### 1. Phase I ESA

The Phase I ESA identifies "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws." To accomplish this task, the following evaluations were conducted:

### **a. *Site Reconnaissance***

A visual reconnaissance of the project site and adjacent properties was conducted, noting physical evidence of potential contamination or possible sources of contamination. In addition, interviews were conducted with persons familiar with the project site regarding present and past usage.

### **b. *Site History Investigation***

The history of the project site was investigated regarding past land use at and near the area, specifically as it relates to the storage, production, use, or disposal of hazardous materials. The sources of information for this evaluation are listed below:

- Aerial photographs
- Munger Oil maps

### **c. *Regulatory Agency Record Review***

Many regulatory agencies compile information concerning sites that generate, store, use, and/or release hazardous materials. Reviewing lists published by the regulatory agencies provide access to this information. A report listing known sites that generate, store, use, and/or have released hazardous material was obtained. In addition, selected government agencies were contacted for information and records regarding environmental conditions at or near the project site. Records reviewed are listed below:

- Federal and state database review
- Local agency records review
- City directory abstract review

## **2. Fire Management Plan**

The objective of the Fire Management Plan was to address vegetation management, introducing primarily native California shrubs and trees to produce a drought tolerant, fire resistive landscape. The report models wildfire under extreme weather and fuel conditions associated with western Los Angeles County. BEHAVE, the fire behavior and fuel modeling system developed by the United States Forest Service, was used to validate both wildfire risk as well as proposed vegetation management recommendations.

## **3. Gas Leak Study**

The Gas Leak Study prepared by Brownfield in April 2016 addresses:

- The air quality effects at the project site during the 2015/2016 Leak at the Aliso Canyon Facility;
- Potential air quality impacts at the project site from hypothetical future leaks at the Aliso Canyon Facility based on air dispersion modeling; and

- Potential health risks associated with the 2015/2016 Leak and hypothetical future leaks at the Aliso Canyon Facility.

The independent expert studies collectively provided in **Appendix IV.G.2** investigate the impacts associated with both the Aliso Canyon Facility 2015/2016 Leak and a potential future leak at this facility at a well site closer to the project site with respect to long-term adverse health impacts, as well as with respect to temporary impacts associated with the odorants, known as mercaptans, added to natural gas for safety reasons.

## **C. EXISTING CONDITIONS**

### **1. Phase I ESA**

As noted, a site reconnaissance was performed to observe current conditions. As illustrated in **Figure IV.G-1, Project Site Plan**, the project site consists of approximately 285 acres of hilly terrain. The site contains dwelling units and a horse ranch, as well as a Hollywood set for television and experimental dwelling units.

The project site is generally located in the northern part of Chatsworth at the base of the Santa Susana Mountains. The project site is bound by the Santa Susana Mountains to the north and east, and by the Simi Hills to the west. The project site is located north of State Route 118 along Browns Canyon Road. The project site consists of the Hidden Creeks Ranch and the Mountain Meadows Ranch at 12900 and 12100 Browns Canyon Road, respectively. Elevation of the project site ranges from approximately 1,500 to 2,700 feet above mean sea level as measured from the US Geological Survey 7.5-Minute Oat Mountain Quadrangle Topographic Map.<sup>1</sup>

#### **a. Site Conditions**

##### **Hidden Creeks Ranch**

The Hidden Creeks Ranch located on the project site consists primarily of grazing land for cattle. Approximately 40 head of cattle currently use the ranch for grazing. A Hollywood set lies near the southern end of the ranch. Two small cabins, a barn, and other structures are present. Storage containers, a trailer, and water tanks are also present in the dwelling area. The barn and storage containers contain tools and equipment for the movie set and film production. No pits, ponds, underground or aboveground tanks except those to store water, stressed vegetation, or other potential environmental concerns were observed.

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<sup>1</sup> US Geological Survey, *7.5-Minute Oat Mountain Quadrangle Topographic Map* (2015).

### **Mountain Meadow Ranch**

The 12-acre Mountain Meadow Ranch boards approximately 90 horses and consists of a ranch house, stables, corals, a barn, and tack sheds. In the area of the tack shed, two small aboveground tanks, both approximately 75 to 100 gallons in capacity, are present. One tank is used to store gasoline, and the other holds diesel; these fuels are used by ranch vehicles. No staining was apparent near the tanks.

An approximate 10,000-gallon capacity water tank is present above the ranch house. The water is derived from an on-site well and provides all water for the ranch. The work areas and stables are clean and well kept. No pits, ponds, underground or above tanks except those to store water, stressed vegetation, or other potential environmental concerns were observed.

### **Experimental Residential Units**

Below the two ranches but located on the project site are several experimental residential units that were constructed to test Styrofoam as an insulation material. The area is rural in nature, and the experiment is no longer being studied at this site.

### **Adjacent Properties**

Areas adjacent to the project site are open space and used primarily for cattle grazing. The Porter Ranch residential development is located approximately 0.5 miles southeast of the project site. These residences would not be affected by any hazard from the proposed activities, nor would the neighboring activities affect the project site.

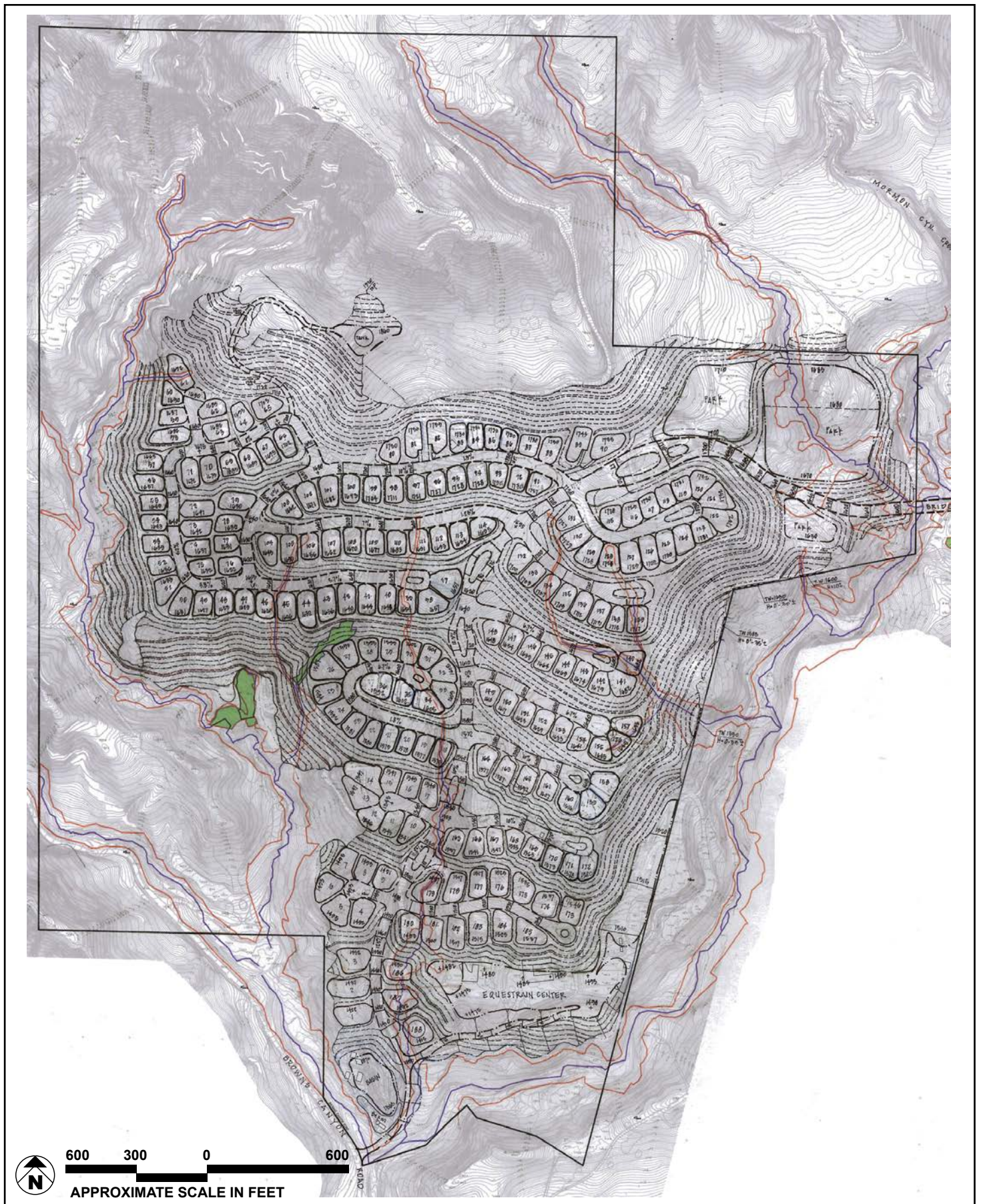
### ***b. Historical Information***

Information regarding the history of the project site was obtained from historical aerial photographs and oil maps. The results of this research are summarized below:

#### **Aerial Photographs**

Aerial photo archives were reviewed to evaluate the history of the project site and vicinity, with particular attention to indications of the potential use, storage, or disposal of hazardous materials. Historical aerial photographs for the years 1928, 1938, 1947, 1956, 1965, 1976, 1990, 1994, and 2002 were reviewed. Based on aerial photograph review, the project site was developed with a dwelling and horse ranch sometime between 1976 and 1990. Prior to this development, the property appeared undeveloped and consisted of mountainous terrain. No environmental concerns were identified on the aerial photographs.





SOURCE: HMK Engineering, Inc. – Sept 2008; Meridian Consultants - 2017

FIGURE IV.G-1

Project Site Plan

## Oil Maps

The project site is not within a designated oil field. Several uncompleted abandoned wells were identified to the northeast of the project site in the Santa Susana Mountains. The project site has not been impacted by oil and gas production.

### c. **Agency Information**

A search of databases maintained by regulatory agencies regarding sites that generate, store, use, and/or have released hazardous materials was conducted. Information from each agency pertaining to the project site is summarized below:

#### **Federal and State Database Review**

Available federal and state agency databases were reviewed to identify government regulated properties that have known or potential recognized environmental conditions within the project site vicinity. The radii of investigation for the federal and state agency lists were selected in accordance with the American Society for Testing and Materials Standards for Environmental Site Assessments. Based on a review of the database report, the project site is not identified in the report, the project site is not within 1 mile of a federal Superfund property, and no properties are listed on the report within 1 mile of the project site.

#### **Local Agency Records Review**

No records were identified from the County of Los Angeles Department of Public Works, Building and Safety Division; the City of Los Angeles Department of Building and Safety; or the County of Los Angeles Fire Department.

## **2. Fire Management Plan**

The project site is located in an area with a high incidence of wildfires. Elevated air temperatures in the summer create drying conditions that dry out vegetation to create fuel. During the fall, elevated air temperatures and dry winds in excess of 20 miles per hour (mph) create conditions ideal for wildfires. Fire protection would be provided by the City of Los Angeles Fire Department (LAFD), which has an existing response time to the project site of 7.6 minutes from Fire Station 28, located 2.6 miles from the project site. Additional information regarding local fire stations can be found in **Section IV.L.2, Fire Protection and Emergency Medical Services**, of this Draft EIR.

The existing risk of wildfire to the project area is from continuous grass and shrubs along the entire perimeter of the project site. The last wildfire within the project boundary occurred in 2008.<sup>2</sup> The surrounding area, including all of the Oat Mountain Quadrangle, in which the project site is located, has

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<sup>2</sup> L. Newman Design Group, *Revised Protected Tree Report* (January 2015).



experienced numerous fires within the past 20 years, and the project is located within a designated historical wildfire corridor.

### 3. Emergency Response Plan

The City of Los Angeles Emergency Operations Organization coordinates among emergency service organizations and government agencies to manage the critical resources necessary during an emergency. The Emergency Operations Organization is made up of many operational divisions, and centralizes command and information coordination to effectively utilize every resource in times of crises.<sup>3</sup> Individual emergency response and evacuation plans are required by state law for businesses that use specified hazardous materials or involve the threat of a potential release of a hazardous material.<sup>4</sup>

### 4. Aliso Canyon Gas Storage Field

The Aliso Canyon Gas Storage Field (“Aliso Canyon”) is located directly north and east of the project site beneath the slopes of Oat Mountain. The largest of four storage fields owned and operated by SoCalGas, the Aliso Canyon site is approximately 3,600 acres in size. The storage field, which is bounded by granite rock on three sides and groundwater on the fourth side, consists of porous sandstone that is able to store large quantities of natural gas.<sup>5</sup>

#### a. ***Background Information Regarding the 2015/2016 Aliso Canyon Facility Gas Leak***

On October 23, 2015, SoCalGas workers discovered a leak at the Standard Sesnon-25 (SS-25) Well at the Aliso Canyon Facility. The SS-25 Well is located approximately 6,130 feet north of Porter Ranch and 8,280 feet northwest of the project site as shown in **Figure IV.G-2, Aliso Canyon Facility SS-25 Well Location**. This well was used to both inject and withdraw natural gas from the Aliso Canyon storage field. The well casing was damaged approximately 500 feet below ground.

Constituents released into the atmosphere from this leak included mercaptans, the odorants added to natural gas, and volatile organic compounds (VOCs), including benzene, and other constituents of natural gas. Air monitoring was conducted during the leak event by the South Coast Air Quality Management District (SCAQMD)<sup>6</sup> and by SoCalGas.<sup>7</sup>

3 Los Angeles Emergency Management Department, “Emergency Operations Organization,” <http://emergency.lacity.org/eoo>. Accessed May 19, 2017.

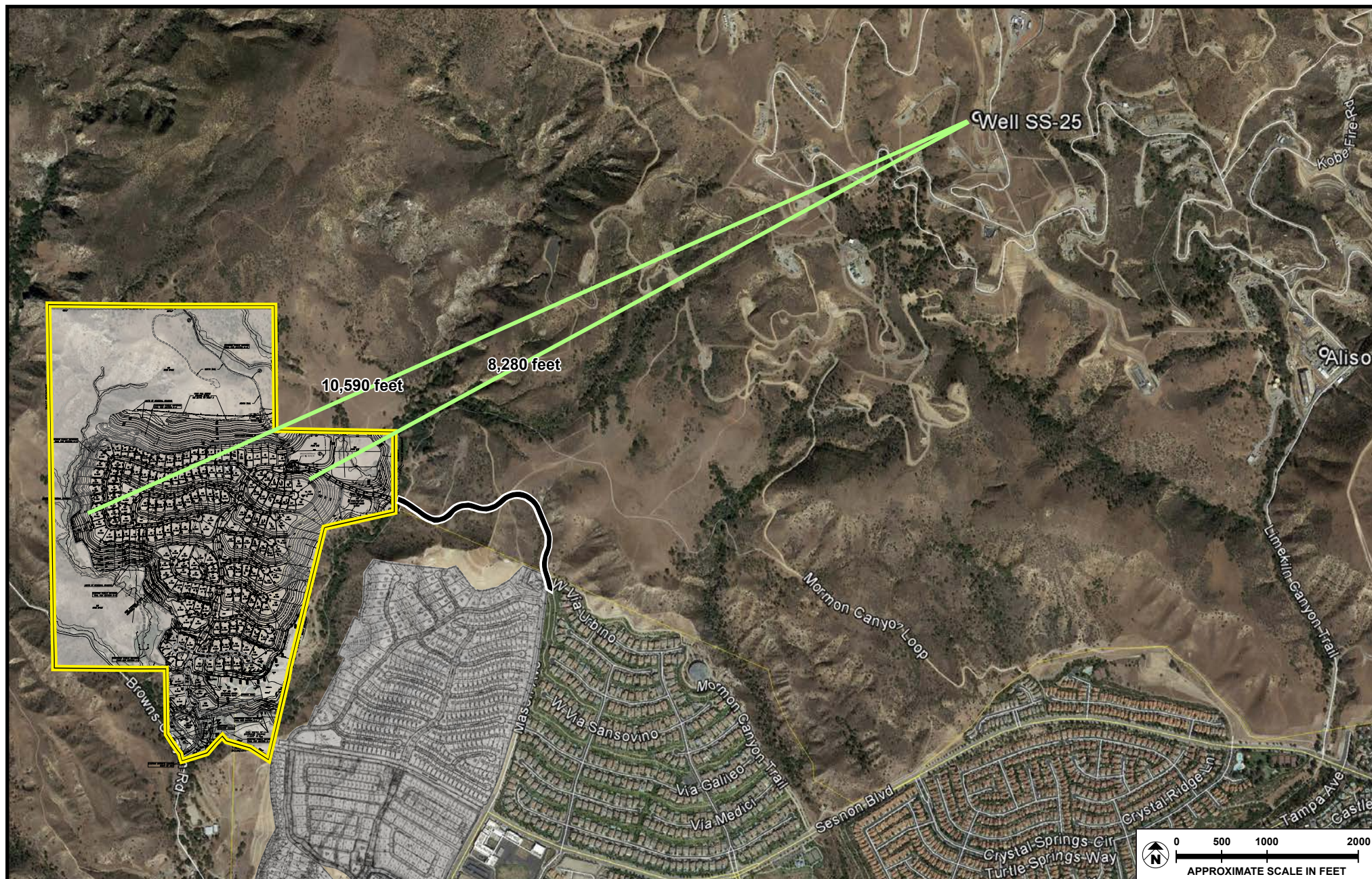
4 City of Los Angeles, Environmental Affairs Department, *L.A. CEQA Thresholds Guide* (2006).

5 Personal communication between Impact Sciences, Inc. and George Minter, Managing Principal, Greer/Daily/Minter Public Affairs Consulting, June 28, 2007.

6 South Coast Air Quality Management District (SCAQMD), “Ambient Air Analysis,” <http://www.aqmd.gov/home/regulations/compliance/aliso-canyon-update/air-sampling>. Accessed May 19, 2017.

7 Southern California Gas, “Aliso Canyon Air Sample Results,” <https://www.socalgas.com/newsroom/aliso-canyon-updates/aliso-canyon-air-sample-results>. Accessed May 19, 2017.





SOURCE: Google Earth - 2017; Meridian Consultants - 2017

FIGURE IV.G-2

## Aliso Canyon Facility SS-25 Well Location



Methane is an odorless gas; the primary health hazard associated with methane is its flammability. Methane levels in Porter Ranch during the leak were substantially lower than flammable limits, and the Los Angeles County Department of Public Health determined methane from the leak did not pose a health risk for this reason. Moreover, inhalation of methane, without the additions of mercaptans, at the concentrations measured during the leak, has not been found to lead to health effects.<sup>8</sup>

However, the Los Angeles County Department of Public Health determined that the emissions from the SS-25 Well leak resulted in temporary health effects in some individuals in Porter Ranch due to the odorants (mercaptans) added to natural gas as a safety measure to ensure detection of natural gas in the event of a leak.<sup>9</sup>

Natural gas primarily contains methane but also contains smaller amounts of other chemicals, including benzene and other air toxics. Because methane is an odorless gas, small amounts of “odorants” are added to the gas to make leaks easier to detect by giving the natural gas a recognizable smell. SoCalGas uses an odorant called Scentinel T-50, which contains two ingredients, tetrahydrothiophene (THT) and t-butyl mercaptan. These gases have strong odors, even at very low air concentrations. The Los Angeles County Department of Public Health stated that exposures to these chemicals are generally not expected to lead to permanent or long-term health problems. However, short-term, recurrent symptoms (including headaches and nausea) may occur with these exposures while the odors persist, and some individuals may be more sensitive than others.

Benzene is an air toxin that can come from a variety of sources, including exhaust from cars and trucks. Background levels of benzene in the Basin primarily result from automobile emissions. Benzene is known to cause cancer and other health effects. Most of the air quality measurements in the community during the leak event showed benzene levels that were similar to typical outdoor air in Southern California. Some higher short-term benzene levels have been measured in the Porter Ranch community following the gas leak, although none exceeded the level expected to cause acute health effects.<sup>10</sup>

No natural gas was injected at the Aliso Canyon Facility after October 25, 2015, per orders from regulatory agencies. In addition, the daily withdrawals of gas were maximized to reduce gas pressure, thus reducing the rate and volume of gas leaking from the well.

8 Los Angeles County Department of Public Health, “Aliso Canyon Gas Leak: Health Fact Sheet” (rev. November 25, 2015). Available at <http://publichealth.lacounty.gov/eh/docs/AlisoCanyonFactSheet.pdf>. Accessed May 19, 2017.

9 Los Angeles County Department of Public Health, “Aliso Canyon Gas Leak.”

10 SCAQMD, “Fact Sheet: Aliso Canyon Gas Leak Health Impacts” (rev. January 29, 2016). Available at: <http://www.aqmd.gov/docs/default-source/compliance/aliso-cyn/fact-sheet-aliso-canyon-health-impacts.pdf?sfvrsn=4>. Accessed May 19, 2017.

The State Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) convened a panel of technical experts from the Lawrence Berkeley National Laboratory and the Sandia National Laboratory to provide independent expertise to assist DOGGR in monitoring and evaluating actions to stop the leak. On December 10, 2015, DOGGR issued an emergency order prohibiting the injection of natural gas into the Aliso Canyon Facility and ordering a variety of actions to stop the leak.

On January 6, 2016, Governor Jerry Brown proclaimed a state of emergency in Los Angeles County due to the leak and ordered all State agencies to respond to the incident as directed by the Governor's Office of Emergency Services and the State Emergency Plan. The Governor's proclamation directed the California Public Utilities Commission and California Energy Commission to take actions to require SoCalGas to maximize daily withdrawals of natural gas from the Aliso Canyon Facility for use or storage elsewhere and directed DOGGR to continue prohibiting the injection of any natural gas into the Aliso Canyon Facility until a comprehensive review of the safety of the storage wells and the air quality of the surrounding community is completed.

On February 5, 2016, DOGGR announced new regulations to strengthen State oversight of oil and gas storage in California, including multiple testing, inspection, and monitoring requirements for all wells in the State.

A temporary seal of the leaking well was established on February 11, 2016, and a permanent cement seal was established February 17, 2016. This seal was confirmed by DOGGR based on temperature, noise, and cement-bond tests.

SCAQMD conducted air monitoring during the leak event to support an assessment of the potential air toxic risks associated with the leak. Based on this monitoring, the SCAQMD determined the levels of community exposure to air contaminants in the natural gas released from the SS-25 Well were not expected to cause a significant increase in overall risk of health effects from either short- or long-term exposure, and were similar to the levels of air toxic pollutants typically found in outdoor air in Southern California. However, exposure to the odorizing compounds that are added to natural gas, such as tetrahydrothiophene and mercaptan, can cause short-term symptoms consistent with many of the symptoms reported by some community members.<sup>11</sup>

The SCAQMD employed multiple sampling methods to collect data related to the gas leak incident. Some samples are collected "instantaneously" over a short period of time, while other samples are collected over longer periods of time (i.e., 24 hours) on a set schedule ("integrated samples"). Instantaneous

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11 SCAQMD, "Health Impacts Estimates: Aliso Canyon Gas Leak—Preliminary Evaluation for Potential Health Impacts" (updated April 26, 2016), <http://www.aqmd.gov/home/regulations/compliance/aliso-canyon-update/health-impacts-estimates>. May 19, 2017.

samples were collected in many different locations within the community starting in late October 2015. The 24-hour integrated sampling for air toxics were conducted at three locations on Sesnon Boulevard in Porter Ranch. These monitoring results were then used to evaluate potential short-term (“acute”) and long-term (“chronic”) health effects.

First, health risks were calculated by SCAQMD, based on the pollutant concentrations at the three monitoring locations discussed above. Second, health risks were calculated by using the monitoring results taken from inside the Aliso Canyon Facility approximately 10 feet from the SS-25 Well and the California Air Resources Board estimates of the total methane leak rates. This information was entered into the AERMOD air dispersion computer model to estimate the pollutant concentrations and resulting health risks throughout the surrounding community. This modeling analysis extended out approximately 4 miles into the community. While the modeling completed by the SCAQMD was based on a small number of samples available to estimate toxic emissions directly from the well, the SCAQMD stated these preliminary modeling results provided an initial estimate of potential health risks.

Health risks are typically presented in terms of noncancer risks and cancer risks. For noncancer risks, estimated exposures can be compared to reference exposure levels (RELs) established by the State Office of Environmental Health Hazard Assessment (OEHHA). **An REL is established at the concentration of the pollutant at or below which adverse health effects are not expected to occur, including for those people who are more sensitive to these effects than the general population.** RELs are established for acute and chronic exposures separately. In addition, estimates of cancer risks can be made based on established OEHHA methods and interpreted as the chance that being exposed to small amounts of these chemicals over a specified time period will cause cancer.

The SCAQMD assumed “chronic exposures” were to be 6 months long because OEHHA guidelines recommend that exposures lasting between 2 and 6 months be calculated assuming a 6-month exposure duration. Given that the leak began on October 25, 2015 and the well was permanently sealed on February 18, 2016, the actual exposure period to air toxics while the SS-25 Well was leaking was approximately 4 months.

To assess short-term, or acute risk, the SCAQMD study used results of the instantaneous samples collected in the surrounding community. One particular sample contained the highest levels of benzene and other air toxics out of more than 70 instantaneous community samples collected. Using the concentrations from this sample, the SCAQMD calculated acute health risk to be approximately one-third of the REL. In other words, the highest short-term air toxic levels measured by SCAQMD were well below the levels where adverse health effects are expected to occur.



To assess potential long-term noncancer and cancer risks, the SCAQMD used data from all the available 24-hour air samples conducted by the SCAQMD. Estimates were made based on an assumed 6-month constant exposure. Based on air sampling data, the levels of benzene and other air toxics were within the range typically seen throughout the Southern California region.<sup>12</sup>

Based on 24-hour integrated samples, SCAQMD determined the long-term noncancer health risk to be less than one-third of the REL, well below the levels where adverse health effects are expected to occur.

Based on previous SCAQMD studies, the estimated average residential cancer risk in the Porter Ranch area from exposure to all ambient air toxics not related to the gas leak over 30 years is in the range of 400 in 1 million to 500 in 1 million. Using the same SCAQMD measurement data in the community, SCAQMD determined cancer risk from the exposure to air toxics from the leak to between 2 in 1 million and 5 in 1 million due to benzene from all sources, including the leaking well and other sources, such as cars and trucks, if exposures persisted for 6 months.

SoCalGas began collecting 12-hour samples and analyzing for hydrogen sulfide in January 2016, and all the samples reported thus far have been below detection limits.

SCAQMD began monitoring for hydrogen sulfide in January 2016, and the results from this monitoring showed levels that were below the chronic REL of 8 parts per billion (ppb).

Governor Jerry Brown signed Senate Bill (SB) 380 into law on May 10, 2016. This law required the DOGGR to continue the prohibition against injecting any natural gas into the Aliso Canyon Facility by SoCalGas until a comprehensive review of the safety of the gas storage wells at the facility was completed and the integrity of the wells is verified. As required by this law, DOGGR ordered that all 114 injection wells at the Aliso Canyon Natural Gas Storage Field be tested for safety and competence before the use of these wells for the injection of natural gas resumes. SB 380 also requires the California Public Utilities Commission (CPUC), by July 1, 2017, “to open a proceeding to determine the feasibility of minimizing or eliminating use of the Aliso Canyon natural gas storage facility located in the County of Los Angeles while still maintaining energy and electric reliability for the region, and to consult with specified entities in making its determination.”

The Los Angeles County Department of Public Health issued a directive on May 13, 2016, requiring SoCalGas to offer comprehensive cleaning to all homes in Porter Ranch, all homes of relocated residents, and all homes within 5 miles where residents experienced symptoms.

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12 SCAQMD, “Health Impacts Estimates: Aliso Canyon Gas Leak—Preliminary Evaluation for Potential Health Impacts” (updated April 26, 2016), <http://www.aqmd.gov/home/regulations/compliance/aliso-canyon-update/health-impacts-estimates>. May 19, 2017.

On June 22, 2016, President Barack Obama signed the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016, or PIPES Act. Among the provisions of the PIPES Act, the secretary of transportation has the authority to issue emergency orders for the pipeline industry and establish national regulations for the operation of natural gas storage facilities. An additional provision in this act established an Aliso Canyon Task Force headed by the United States Department of Transportation to, among other measures, recommend how to prevent future gas leaks at this facility.

DOGGR consulted with independent technical experts from the Lawrence Berkeley, Lawrence Livermore, and Sandia National Laboratories to develop the requirements of this facility safety review. DOGGR continued to consult with these experts throughout the implementation and completion of the comprehensive safety review. This comprehensive safety review required that each of the 114 active wells in the Aliso Canyon Facility either pass a thorough battery of tests in 2 phases to resume gas injection or be taken out of operation and isolated from the underground gas reservoir.<sup>13</sup> On November 1, 2016, SoCalGas notified DOGGR that mandatory well testing at the Aliso Canyon storage facility had been completed and requested permission to resume natural gas injection.<sup>14</sup> As of July 19, 2017, approximately 60 percent of wells have been taken out of operation and isolated from the facility. The remaining wells that passed the stringent battery of tests were subject to stringent new retrofit and inspection requirements, including:<sup>15</sup>

- Active wells are now equipped with real-time pressure monitors.
- The company must conduct routine aerial monitoring for the presence of any methane.
- Well heads are inspected daily using infrared and other leak-detecting technology.
- All of the wells used for injection and production have new steel tubing and new seals (known as packers) inside the wellbore.
- The gas pressure in the storage reservoir has been reduced, from 3,600 PSI to 2,926 PSI.
- Another layer of protection ensures that gas flows only through an inner steel pipe. This allows the outer casing to serve as a secondary safety barrier.

Before any reinjection could occur, DOGGR and the CPUC were required to confirm through inspection that SoCalGas and the Aliso Canyon Facility are in compliance with all the conditions set forth in SB 380;

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13 California Department of Conservation, "Test Results of Aliso Canyon Wells," [www.conservation.ca.gov/dog/AlisoCanyon/Pages/Well-Detail.aspx](http://www.conservation.ca.gov/dog/AlisoCanyon/Pages/Well-Detail.aspx). Accessed January 1, 2017.

14 California Department of Conservation, Public Affairs Office, "Statement from Division of Oil, Gas, and Geothermal Resources on SCG's Request to Restart Injection at Aliso Canyon" (November 1, 2016). Available at: [www.conservation.ca.gov/dog/Documents/Aliso/DOC\\_statement\\_on\\_SCG\\_request\\_to\\_re-start\\_injection.pdf](http://www.conservation.ca.gov/dog/Documents/Aliso/DOC_statement_on_SCG_request_to_re-start_injection.pdf). May 19, 2017.

15 California Public Utilities Commission and California Department of Conservation. Joint News Release: *State Inspections Confirm Safety of Aliso Canyon Natural Gas Storage Facility*. July 19, 2017. <http://www.conservation.ca.gov/dog/Documents/Aliso/News%20Release.pdf>. Accessed July 2017.

the State's emergency regulations for underground gas storage; and the state oil and gas supervisor's Formal Order 1109, all of which were intended to ensure the protection of public health and safety as well as the environment. Those steps include an on-site inspection to confirm the facility complies with all relevant rules and regulations, as well as opportunity for public input.

Following these inspections and analysis, as well as the implementation of new safety protocols, state engineering and safety enforcement officials announced on July 19, 2017, that the facility is safe to operate and can reopen at a greatly reduced capacity to protect public safety and prevent an energy shortage in Southern California.

The CPUC issued a directive on July 19, 2017, ordering SoCalGas to maintain a range of working gas in the Aliso Canyon Gas Storage Facility to ensure safety and the reliability of natural gas to meet regional needs.

Storage capacity will be restricted to approximately 28 percent of the facility's maximum capacity to avoid energy disruptions in the Los Angeles area, according to CPUC Executive Director Timothy Sullivan.<sup>16</sup> The facility's operator, SoCalGas, can only withdraw from the facility for specific purposes. SoCalGas must maximize usage of the other fields, and there is a cap on what can be stored in the facility. The end result is that the facility will only be used as a last resort for reliability purposes. Specifically, this means:

- SoCalGas cannot inject more than 23.6 billion cubic feet.
- There are specific protocols in effect defining when SoCalGas can withdraw. SoCalGas must limit withdrawals to times when gas is needed for reliability and only after all the other fields are at full usage and steps have been taken to reduce or shift demand. Those protocols are available on the CPUC's website at [www.cpuc.ca.gov/Aliso](http://www.cpuc.ca.gov/Aliso).
- SoCalGas has been directed by the CPUC to maintain storage capacity in their other storage facilities to a level that maximizes the ability of those fields to meet demand in the Los Angeles Basin.<sup>17</sup>

This directive will ultimately be superseded by the CPUC's determination in the formal investigation required by SB 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility while still maintaining energy and electric reliability for the region. In this interim period, CPUC staff will continue to evaluate the success of mitigation measures to reduce reliance on the Aliso Canyon facility and may amend the July 19, 2017 directive.

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16 California Public Utilities Commission and California Department of Conservation. Joint News Release: *State Inspections Confirm Safety of Aliso Canyon Natural Gas Storage Facility*. July 19, 2017. <http://www.conservacion.ca.gov/dog/Documents/Aliso/News%20Release.pdf>. Accessed July 2017.

17 California Public Utilities Commission. Summary on the Operational Constraints at the Aliso Canyon Natural Gas Storage Facility. July 21, 2017. [http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/News\\_Room/News\\_and\\_Updates/AC.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/AC.pdf). Accessed July 2017.



SoCalGas has prepared a risk management plan that identifies prevention and mitigation steps for potential hazards, and a supplemental analysis of the seismic risk to the facility is in process. Additionally, the CPUC continues to hold a proceeding that will decide the future of the facility.<sup>18</sup>

**b. February 2016 Air Testing at Hidden Creeks Estates Project Site**

Brownfield conducted independent air testing on the project site February 12–15, 2016, during the leak event at the Aliso Canyon Facility. Brownfield conducted this testing at three locations from the northern to southern edge of the project site. The eastern edge of the project site is located approximately 8,000 feet from the SS-25 Well where the leak occurred. By comparison, the northern edge of Porter Ranch is located approximately 7,000 feet from the SS-25 Well.

In addition, Brownfield conducted 4 weeks of wind measurements February 1–February 29, 2016. The testing included use of summa canisters with regulators that allow air intake over 24 hours and Tedlar bags to capture additional air samples.

## **D. REGULATORY FRAMEWORK**

### **1. Federal Regulations**

Applicable federal regulations include the US Environmental Protection Agency's National Emissions Standards for Hazardous Air Pollutants (NESHAP), which regulate the use, removal, and disposal of asbestos-containing material (ACMs) and are implemented by the South Coast Air Quality Management District (SCAQMD) and the Occupational Safety and Health Act (OSHA), which sets standards for safe exposure limits of chemicals to which construction workers are exposed. OSHA guidelines require that specific health and safety plans be implemented during construction for given chemical exposure risks. These guidelines are relevant to the project, because OSHA regulates methane gas and lead exposure.

### **2. State Regulations**

The Division of Oil, Gas, and Geothermal Resources (DOGGR) enforces regulations regarding the permitting, establishment, completion, and abandonment/re-abandonment of gas and oil wells. If oil or gas wells are located on the project site, proper abandonment is required by DOGGR.

The California State Hazardous Waste Control Law (HWCL) establishes regulations for hazardous waste, and the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) administers the state hazardous waste program.

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<sup>18</sup> California Public Utilities Commission and California Department of Conservation. Joint News Release: *State Inspections Confirm Safety of Aliso Canyon Natural Gas Storage Facility*. July 19, 2017. <http://www.conservation.ca.gov/dog/Documents/Aliso/News%20Release.pdf>. Accessed July 2017.

The Division of Occupational Safety and Health (DOSH; more commonly, Cal/OSHA) regulates lead exposure during construction activities as well as airborne contaminants such as lead, asbestos, and soil gases. Employers must implement an Injury and Illness Prevention Program, which is a safety program to protect workers from workplace hazards, such as those involved in the demolition/renovation of existing buildings and construction of the project.

The SCAQMD regulates emissions of asbestos during demolition and renovation activities through specific removal, handling, and clean-up procedures (Rule 1403, Asbestos Emissions from Renovation/Demolition Activities).

### **3. Local Regulation**

Chapter IX, Article 1, Division 71, Section 91.7103 of the Los Angeles Municipal Code lays out the Los Angeles Methane Seepage Regulations for buildings and paved areas located in either a Methane Zone or Methane Buffer Zone.

The Los Angeles Fire Department regulates hazardous materials for the City of Los Angeles by issuing permits for hazardous materials handling and administering sections of the Los Angeles City Fire Code applicable to hazardous materials.

## **E. ENVIRONMENTAL IMPACT ANALYSIS**

### **1. Significance Thresholds**

#### ***a. Appendix G of the State CEQA Guidelines***

In the 2015 California Supreme Court case *California Building Industry Association v. Bay Area Air Quality Management District* (CBIA v. BAAQMD), the court held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of the project.<sup>19</sup> The revised thresholds are intended to comply with this decision. Specifically, the decision held that an impact from the existing environment to the project, including future users and/or residents, is not an impact for purposes of CEQA. However, if the project, including future users and residents, exacerbates existing conditions that already exist, that impact must be assessed, including how it might affect future users and/or residents of the project. For example, if construction of the project on a hazardous waste site will cause the potential dispersion of hazardous waste in the environment, the EIR should assess the impacts of that dispersion to the environment, including to the project's residents.

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<sup>19</sup> California Building Industry Association v. Bay Area Air Quality Management District (Dec. 17 2015) 62 Cal.4th 369.

In accordance with Appendix G to the State CEQA Guidelines, the Project could have a significant impact if it were to:<sup>20</sup>

- (a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- (b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- (c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Please see **Section VII, Effects Found Not to be Significant** of this Draft EIR).
- (d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment caused in whole or in part from the project's exacerbation of existing environmental conditions?
- (e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Please see **Section VII, Effects Found Not to be Significant** of this Draft EIR).
- (f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Please see **Section VII, Effects Found Not to be Significant** of this Draft EIR).
- (g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- (h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands caused in whole or in part from the project's exacerbation of existing environmental conditions?

#### **b. City of Los Angeles CEQA Thresholds Guide**

As discussed in the *L.A. CEQA Thresholds Guide*, a project would normally have a significant impact on the environment if it would "involve the use, generation, disposal, transport or management of potentially

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<sup>20</sup> Thresholds d and h are updated in accordance with the *CBIA v. BAAQMD* decision.



hazardous or explosive substances (including, but not limited to, oil, pesticides, chemicals or radiation) in sufficient quantities to cause a potential hazard, or if the project would require a new or revised risk management plan, emergency response or emergency evacuation plan.”<sup>21</sup>

#### **Risk of Upset/Emergency Preparedness**

The determination of significance for impacts associated with risk of upset and emergency preparedness shall be made on a case-by-case basis, considering the following factors:

- (i) The applicable regulatory framework;
- (j) The probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance;
- (k) The degree to which the project may require a new, or interfere with an existing, emergency response or evacuation plan and the severity of the consequences; and
- (l) The degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance.

#### **Human Health Hazards**

Impacts would also be considered significant to human health if the project would create a health hazard by introducing a hazard or disturbing, removing or disposing of a hazard found on site or locate people adjacent to a health hazard.<sup>22</sup> The determination of significance of hazardous material impacts on human health is decided on a case-by-case basis and considers the following factors:

- (m) The regulatory framework for the health hazard;
- (n) The probable frequency and severity of consequences to people from exposure to the health hazard; and
- (o) The degree to which project design would reduce the frequency of exposure or severity of consequences of exposure to the health hazard.

Based on these factors, the project would have a significant impact if:

- The project would not comply with applicable regulations regarding the handling and storage of hazardous materials;

<sup>21</sup> City of Los Angeles, Environmental Affairs Department, *L.A. CEQA Thresholds Guide* (2006), p. F.1-2.

<sup>22</sup> City of Los Angeles, Environmental Affairs Department, *L.A. CEQA Thresholds Guide* (2006), pp. F.2-2–F.2-3.

- The project would expose people or structures to substantial risk resulting from the release of a hazardous material, or from exposure to a health hazard in excess of regulatory standards; or
- The project would interfere with existing emergency response capacity to the project area over existing conditions.

## 2. Project Impacts

- (a) *Impacts could be significant if the project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.*

Construction of the project would involve the temporary use of potentially hazardous materials, including vehicle fuels, paints, oils, transmission fluids, solvents, and other acidic and alkaline solutions that would require special handling, transport, and disposal. However, all potentially hazardous materials would be used and stored in accordance with applicable regulations. As such, the project would not create a significant hazard to the public or the environment.

Similarly, during operation of the project, typical household chemicals like cleaning solvents and landscaping materials would be used. However, the presence and use of these chemicals would not pose as a substantial health hazard to people or property. Therefore, implementation of the project would not expose people to health hazards during project construction or operations. Impacts would be less than significant.

- (b) *The project could have a significant impact if it would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.*
- (j) *Impacts could be considered significant based on the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance.*
- (l) *Impacts could be considered significant based on the degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance.*

According to the conclusions of the Phase I ESA prepared for the project site, the project site has not been affected by oil and gas production and, therefore, the likely presence of contamination within the soil is low. Additionally, there is no evidence of historic agricultural activities on the project site such that chemical pesticides and herbicides would be a concern. As such, earthmoving, grading, and construction activities would not disturb or affect contaminated soil and would not pose a threat to construction workers or surrounding land uses. Furthermore, methane gas is not a concern because the project site is

not located within a City Methane Zone or near a petroleum facility.<sup>23</sup> Therefore, construction impacts to hazards and hazardous materials would be less than significant.

The Phase I ESA did not identify any known hazardous substances, ACMs, and/or lead-based paint on the project site. The project site was not identified as a contaminated site in the records search. The project site is not within 1 mile of a federal Superfund property, is not impacted by oil and gas production, and is not located within 1 mile of a site listed in the EDR report. Additionally, local agency records review did not indicate any hazards, and no environmental concerns were identified on historical aerial photographs. During a site visit to observe current conditions, no conditions were observed that would be expected to impact the project site or surrounding land uses with respect to hazards and/or hazardous materials.

According to the project site conditions documented in the Phase I ESA, no structures containing asbestos are located on the project site and the potential for soil contamination is low. Therefore, implementation of the project is not expected to result in potential accidental release or explosions on the project site as a result of the presence of hazardous substances and impacts would be less than significant.

During project operation, typical household chemicals like cleaning solvents would be used in the project residences. However, these products do not pose a substantial risk to people or property and are not likely to result in explosion or cause harm to humans or the environment. Operational impacts for hazards and the use of hazardous substances by the project site would not have the potential to result in accidental release or explosion of hazardous substances, therefore impacts would be less than significant.

#### **a. Aliso Canyon Gas Storage Field**

As described above, the Aliso Canyon Gas Storage Field ("Aliso Canyon") is located directly north and east of the project site beneath the slopes of Oat Mountain. On October 23, 2015, SoCalGas workers discovered a leak at the Standard Sesnon-25 (SS-25) Well at the Aliso Canyon Facility. The SS-25 Well is located approximately 6,130 feet north of Porter Ranch and 8,280 feet northwest of the project site. A study titled *Potential Impacts of an Aliso Facility Gas Leak on the Proposed Hidden Creeks Estates Project Site* was prepared by Brownfield Subslab ("Brownfield") in April 2016 to determine the potential short- and long-term health risks to future residents on the project site from a future natural gas leak at the Aliso Canyon Facility. The following discusses the potential air quality impacts at the project site from hypothetical future leaks at the Aliso Canyon Facility based on air dispersion modeling; and potential health risks associated with the 2015/2016 Leak and hypothetical future leaks at the Aliso Canyon Facility.

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23 Harry Finney, Senior Project Manager, Applied Environmental Technologies Inc., personal communication, November 14, 2006.

**Air Modeling of Effects of Potential Future Leak at Aliso Canyon Facility on the Project Site**

Alta Environmental (“Alta”) conducted independent air modeling using AERMOD air dispersion software, based on SCAQMD guidelines, to study the effects of the SS-25 Well leak on the project site and, most important, to conservatively study the potential effects if a similar leak were to occur at the gas well located nearest to the project site. Alta conducted this modeling for a well located at the Aliso Canyon Facility approximately 3,000 feet from the project site. The modeling reflected historical wind and weather patterns, area topography, and other information as described in **Appendix IV.G**.

The project site is located at a lower elevation than the Aliso Canyon Facility; the northern portion of the site, closest to Aliso Canyon, is proposed to be preserved as open space. The wind measurements conducted on the site show that the project site is windier than Porter Ranch; thus, air emissions would be dispersed to a greater degree at the project site in comparison to Porter Ranch.

Maximum 1-hour, 8-hour, 24-hour, and 5-year average ground level concentrations (GLCs) were modeled by Alta for the primary chemicals of concern in natural gas, which are methane, benzene, and sulfur compounds, such as hydrogen sulfide. Based on information from SoCalGas, methane gas accounts for approximately 93 percent of the natural gas stored at the Aliso Canyon Facility. Approximately 0.0024 percent of natural gas is benzene. The concentration of sulfur compounds, measured as hydrogen sulfide, is limited by the SCAQMD to 16 parts per million by volume, which is equivalent to approximately 0.0029 percent.

The modeling results showing the maximum concentrations of natural gas, methane, benzene and hydrogen sulfides on the project site from the 2015/2016 SS-25 Well leak are shown below in **Table IV.G-1, SS-25 Well Leak AERMOD Modeling Results Summary**.

**Table IV.G-1**  
**SS-25 Well Leak AERMOD Modeling Results Summary**

Averaging Time	Max GLC ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>	Max GLC <sup>b</sup> (ppmv) <sup>c</sup>
<b>Natural Gas</b>		
1-hour	120,020	154.45
8-hour	28,650	36.87
24-hour	12,092	15.56
Period (5 years)	2,690	3.46
<b>Methane</b>		
1-hour	111,619	170.14
8-hour	26,645	40.61
24-hour	11,246	17.14
Period (5 years)	2,502	3.81
Averaging Time	Max GLC ( $\mu\text{g}/\text{m}^3$ )	Max GLC (ppbv) <sup>d</sup>
<b>Benzene</b>		
1-hour	2.641	0.827
8-hour	0.630	0.197
24-hour	0.266	0.083
Period (5 years)	0.059	0.019
<b>Hydrogen Sulfide</b>		
1-hour	3.444	2.471
8-hour	0.822	0.590
24-hour	0.347	0.249
Period (5 years)	0.077	0.055

Source: Brownfield Subslab, Potential Impacts of an Aliso Facility Gas Leak on the Proposed Hidden Creeks Project Site (April 15, 2016), Exhibit A: Alta Report, Air Modeling Study, Table 4—Scenario 1 (Well SS 25) Results Summary.

<sup>a</sup>  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>b</sup> Natural gas and methane concentrations are in ppmv (parts per million by volume), and benzene and hydrogen sulfide concentrations reported are in ppbv (parts per billion by volume).

<sup>c</sup> ppmv =  $\mu\text{g}/\text{m}^3 \times 24.45$  (liters/mole)  $\times$  molecular weight (grams per mole) / 1,000.

<sup>d</sup> ppbv =  $\mu\text{g}/\text{m}^3 \times 24.45$  (liters/mole)  $\times$  molecular weight (grams per mole).

ALTA Environmental also completed modeling for a theoretical leak at the well located closest to the project site. The modeling results showing the maximum concentrations of natural gas, methane, benzene and hydrogen sulfides on the project site for this scenario are shown below in **Table IV.G-2, Hypothetical Leak at Nearest Well AERMOD Modeling Results Summary**.

The modeling shows the 8-hour average concentrations levels of hydrogen sulfides at 1,000 times less than the levels deemed to be safe in the workplace by the National Institutes of Health.



**Table IV.G-2**  
**Hypothetical Leak at Nearest Well AERMOD Modeling Results Summary**

Averaging Time	Max GLC ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>	Max GLC b (ppmv) <sup>c</sup>
<b>Natural Gas</b>		
1-hour	451,161	580.57
8-hour	97,667	125.68
24-hour	48,049	61.83
Period (5 Years)	6,334	8.15
<b>Methane</b>		
1-hour	419,580	639.57
8-hour	90,830	138.45
24-hour	44,686	68.12
Period (5 years)	5,890	8.98
Averaging Time	Max GLC ( $\mu\text{g}/\text{m}^3$ )	Max GLC (ppbv) <sup>d</sup>
<b>Benzene</b>		
1-hour	9.927	3.107
8-hour	2.149	0.673
24-Hour	1.057	0.331
Period (5 years)	0.139	0.044
<b>Hydrogen Sulfide</b>		
1-hour	12.948	9.289
8-hour	2.803	2.011
24-hour	1.379	0.989
Period (5 years)	0.182	0.130

Source: Brownfield Subslab, Potential Impacts of an Aliso Facility Gas Leak on the Proposed Hidden Creeks Project Site (April 15, 2016), Exhibit A: Alta Report, Air Modeling Study, Table 5—Scenario 2 (Hypothetical Future Leak) Results Summary.

<sup>a</sup>  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>b</sup> Natural gas and methane concentrations are in ppmv (parts per million by volume), and benzene and hydrogen sulfide concentrations reported are in ppbv (parts per billion by volume).

<sup>c</sup> ppmv =  $\mu\text{g}/\text{m}^3 \times 24.45$  (liters/mole)  $\times$  molecular weight (grams per mole) / 1,000.

<sup>d</sup> ppbv =  $\mu\text{g}/\text{m}^3 \times 24.45$  (liters/mole)  $\times$  molecular weight (grams per mole).

### Health Risk of Potential Future Leak at Aliso Canyon Facility on the Project Site

A Human Health Risk Assessment (HRA)<sup>24</sup> based on the information and data summarized above was prepared by Dr. Susan Mearns to assess the potential health risk attributable to exposure to the natural gas ground-level emissions from the Aliso Canyon Facility. The HRA was prepared in accordance with State and federal guidelines. Toxicity values were combined with exposure factors to estimate both noncancer adverse health effects and cancer risks. The risk characterization process incorporated data from the exposure and toxicity assessments. The exposure assessment considered estimated chemical intakes, exposure modeling assumptions, and exposure pathways to estimate risks and hazards from exposure over a given time period.

The HRA determined that concentrations of VOCs detected in ambient air within the project site are less than background indoor air concentrations and do not pose an adverse impact to human health. The modeled GLCs for benzene, both for the SS-25 Well leak and for a theoretical leak at the well site closest to the project site, result in noncancer and cancer risks that are below human health thresholds and, for this reason, are not at a level that would result in an adverse impact to human health.

In addition to providing a quantitative HRA, a qualitative assessment of potential health impacts associated with the odorants added to natural gas was conducted. The addition of odorants to natural gas at a concentration that is readily detectable by a person with a normal sense of smell is required by federal pipeline safety regulations. As noted previously, the odorants commonly used are primarily blends of various organic sulfur compounds, including mercaptans. The ability to perceive odor varies widely among individuals, with more than a thousandfold difference between the least and most sensitive individuals in acuity having been observed. Differences are attributable, in part, to age, health, and gender, with females tending to have a keener sense of smell than males. The odorant added to natural gas is added at concentrations that may result in some proportion of the population with heightened olfactory acuity, such as the young and females, experiencing irritant health effects, such as headaches, nausea, and skin irritation, when exposed to natural gas, as was the case with Porter Ranch residents during the period of the SS-25 Well leak.

### Conclusion

Based on the assessment of health risks from the SS-25 Well leak by the Los Angeles County Department of Public Health and SCAQMD, and the conclusions of the site-specific HRA, the potential short- and long-term health risks to future residents on the project site from a future natural gas leak at the Aliso Canyon Facility would be less than significant. Residents could experience short-term irritant health effects, as

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24 Brownfield Subslab, *Potential Impacts of an Aliso Facility Gas Leak on the Proposed Hidden Creeks Project Site* (April 15, 2016), Exhibit B: Mearns Report, Health Risk Assessment.

described above, from a similar natural gas leak. However, the enhanced regulatory oversight of the Aliso Canyon Facility, including but not limited to the ongoing required comprehensive review and testing of the safety of all storage wells before any natural gas can be injected and stored at the facility, will reduce the likelihood of a future leak of the magnitude and duration of the 2015/2016 Leak event. Accordingly, the potential for future residents to experience short-term irritant health effects from a future leak at Aliso Canyon is also considered to be less than significant.

- (d) *Impacts could be significant if the project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would create a significant hazard to the public or the environment caused in whole or in part from the project's exacerbation of existing environmental conditions.*
- (n) *Impacts would be considered significant based on the probable frequency and severity of consequences to people from exposure to the health hazard.*

The Phase I ESA did not identify any potential health hazards to humans, the environment, or the project site. The project site is not identified as a contaminated site according to a records search, is not within one mile of a federal Superfund property, is not impacted by oil and gas production, and is not located within one mile of a site listed on the EDR report. Additionally, review of local agency records did not indicate any hazards and no environmental concerns were identified on historical aerial photographs. During site visits conducted on June 13 and July 7, 2006, no conditions were observed that would be expected to expose the project site or residents of the project site to health hazards.

During operation of the project, typical household chemicals like cleaning solvents and landscaping materials would be used. However, the presence and use of these chemicals would not pose as a substantial health hazard to people or property. Therefore, implementation of the project would not exacerbate the risk to people of exposure to health hazards during project construction or operations. Impacts would be less than significant.

- (g) *Impacts could be significant if the project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*
- (k) *Impacts would be significant based on the degree to which the project may require a new, or interfere with an existing, emergency response or evacuation plan and the severity of the consequences.*

As part of the project, Mason Avenue would be extended to become the primary access road into the project site. Browns Canyon Road would then become used primarily as a secondary emergency access road for the project and surrounding uses. The extension of Mason Avenue would provide an improved roadway constructed to comply with City of Los Angeles Department of Transportation's (LADOT's) current street standards, and would shorten the travel route for emergency access vehicles. The additional access route would therefore increase response times for emergency vehicles and would also

relieve traffic in the event of an evacuation of the project site. Additionally, improvements proposed for Browns Canyon Road, as listed in **Table II-2, Location for Turnouts on Browns Canyon Road**, in **Section II, Project Description**, would further enhance the existing emergency access to the project site and the uses surrounding the project site. Therefore, through the proposed improvements to existing emergency access to the Browns Canyon area, implementation of the project would result in less than significant impacts with respect to project design and impacts on the frequency and/or severity of potential accidental release and/or explosion of a hazardous substance.

- (h) *Impacts could be significant if the project would expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands caused in whole or in part from the project's exacerbation of existing environmental conditions.*

As noted previously, the project site is located within a historical wildfire corridor and immediately adjacent to the City of Los Angeles High Hazard Fire Zone, which denotes areas within the City subject to high fire danger. Elevated temperatures and winds in excess of 20 mph create drying conditions for the coastal live oak woodland vegetation and create a fire hazard for the project site, for people located on the project site, and for buildings and structures located on the project site.

Currently no fire hydrants exist on the project site; however, hydrants capable of releasing 4,000 gallons per minute flowing simultaneously, as set by the LAFD, would be constructed on the project site.<sup>25</sup> Additionally, as discussed in **Section IV.L.2**, through the incorporation of mitigation measures **MM-FIRE-1** through **MM-FIRE-14**, identified in the Fire Management Plan, features would be included in the project design to prevent catastrophic wildfires, enhance emergency access and response for the project site, and reduce potential health and safety hazards for project residents and structures. With the implementation of mitigation, the risk to people or structures of exposure to wildfire would not be exacerbated; therefore, impacts would be reduced to a less than significant level.

- (i) *Impacts could be considered significant based on the applicable regulatory framework.*
- (m) *Impacts would be considered significant based on the regulatory framework for the health hazard.*

Federal regulations for hazardous materials include the NESHAP, which regulates the use, removal, and disposal of ACMs, and are implemented by SCAQMD and OSHA. State regulatory agencies include DOGGR, CalEPA, DTSC, Cal/OSHA, and the SCAQMD. DOGGR enforces regulations regarding the permitting, establishment, completion, and abandonment/re-abandonment of gas and oil wells. DTSC administers the state hazardous waste program established by the HWCL. SCAQMD regulates emissions of asbestos

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25 Personal communication with Douglass Barry, Assistant Fire Marshal, Bureau of Fire Prevention and Public Safety, Los Angeles Fire Department, May 4, 2006.

during demolition and renovation activities through specific removal, handling, and clean-up procedures. Local regulations include the Los Angeles Methane Seepage Regulations for buildings and paved areas located in either a Methane Zone or Methane Buffer Zone. The LAFD issues permits for hazardous materials handling and administers sections of the Los Angeles City Fire Code applicable to hazardous materials. Compliance with all applicable regulatory requirements during demolition, construction and operation of the project would reduce impacts to human health hazards, and risk of upset would be less than significant.

- (o) *Impacts would be considered significant based on the degree to which project design would reduce the frequency of exposure or severity of consequences of exposure to the health hazard.*

As discussed above, as part of the project, the existing Mason Avenue would be extended to become the primary access road into the project site. Browns Canyon Road would then become used primarily as a secondary emergency access road for the project and surrounding uses. The extension of Mason Avenue would provide an improved roadway constructed to comply with LADOT's current street standards, and would shorten the travel route for emergency access vehicles. The additional access route would therefore increase response times for emergency vehicles and would also relieve traffic in the event of an evacuation of the project site. Additionally, improvements proposed for Browns Canyon Road would further enhance the existing emergency access to the project site and the uses surrounding the project site. Therefore, through the proposed improvements to existing emergency access to the Browns Canyon area, implementation of the project would result in less than significant impacts related to the frequency of exposure or severity of consequences of exposure to health hazards.

### 3. Cumulative Impacts

For the project, the hazardous impacts associated with a project occur on a project-by-project basis, rather than in a cumulative nature. According to the Phase I ESA prepared for the project site, the likely presence of hazards and/or hazardous materials on the project site was determined to be low. Additionally, the records search conducted as part of the Phase I ESA identified that properties surrounding the project site are not listed in local, state, or federal databases of known and potential environmentally impact properties. Therefore, the potential for surrounding land uses and projects to affect the project site has been determined to be low. Also, project implementation would comply with regulatory controls to manage existing and future project-specific hazards, any potential cumulative impacts associated with the project would be decreased, as the harmful substances and subsequent exposure to a health hazard would be removed from the project site. Further, with the proposed improvements along Browns Canyon Road, and with implementation of mitigation measures **MM-FIRE-1** through **MM-FIRE-14**, as identified in **Section IV.L.2**, emergency access and emergency response within the Browns Canyon area and for the



project site would be enhanced. With the implementation of the mitigation measures identified in **Section IV.L.2**, and compliance with regulations, implementation of the project would not exacerbate the risk to people of exposure to hazards or hazardous materials. Therefore, potentially significant project-specific as well as cumulative impacts associated with implementation of the project would be reduced to be less than significant levels.

#### **4. Mitigation Measures**

Mitigation measures **MM-FIRE-1** through **MM-FIRE-14**, included in **Section IV.L.2**, would reduce potentially significant emergency access and emergency response hazards to a less than significant level. These measures include: incorporating project design features designed to minimize fire risk and danger; designating accessible access and evacuation routes; coordination with LAFD regarding fire hydrant and fire flow requirements; annual reporting to the City of Los Angeles Fire Marshall regarding compliance with fuel management zone requirements; maintaining specific vegetation on the project site and avoiding the use of specific fire-prone species; and incorporating adequate vegetation clearance and plant spacing into the project design.

#### **5. Level of Significance After Mitigation**

With implementation of the recommended mitigation measures, **MM-FIRE-1** through **MM-FIRE-14**, included in **Section IV.L.2**, project and cumulative impacts related to hazards and hazardous materials would be less than significant.