4.10 Mineral Resources

This section of the PEA describes the existing conditions related to the mineral resources for the Proposed Project. The impacts and mitigation measures, where applicable, are also discussed.

Project components that do not involve ground disturbance were not assessed. These components include installation of upgraded relay systems and equipment at the Newhall, Chatsworth, and San Fernando Substations and construction support activities.

The California Geological Survey (CGS), formerly the California Division of Mines and Geology (DMG), classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975 and assists the CGS in the designation of lands containing significant aggregate resources. Mineral Resource Zones (MRZs) have been designated to indicate the significance of mineral deposits. The MRZ categories follow:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** Areas containing mineral deposits the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ.

According to the California DMG (1994), Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California, Part II Los Angeles County, Open File Report 94-14, Plate 1A-Generalized Mineral Land Classification Map of Los Angeles County-North-Half, the Proposed Project is located in MRZ-3 zone. MRZ-3 is part of the San Fernando Valley Production Consumption (PC), an area containing mineral deposits the significance of which cannot be evaluated from available data (CDMG, 1994). These zones are classified in accordance to the presence or absence of significant mineral deposits suitable for Portland Cement concrete grade aggregate. The Aliso Canyon Oil Field, lies on the northwest portion of this PC area. The entire Proposed Project lies in MRZ-3, with the exception of several lenses of MRZ-1 along Gavin Canyon (i.e., The Old Road) in the vicinity of Poles# 4-6 thru 4-9, and 5-1 thru 5-3, east of the 5 Freeway, and a MRZ-2 zone located adjacent and east-northeast of the Newhall Substation.

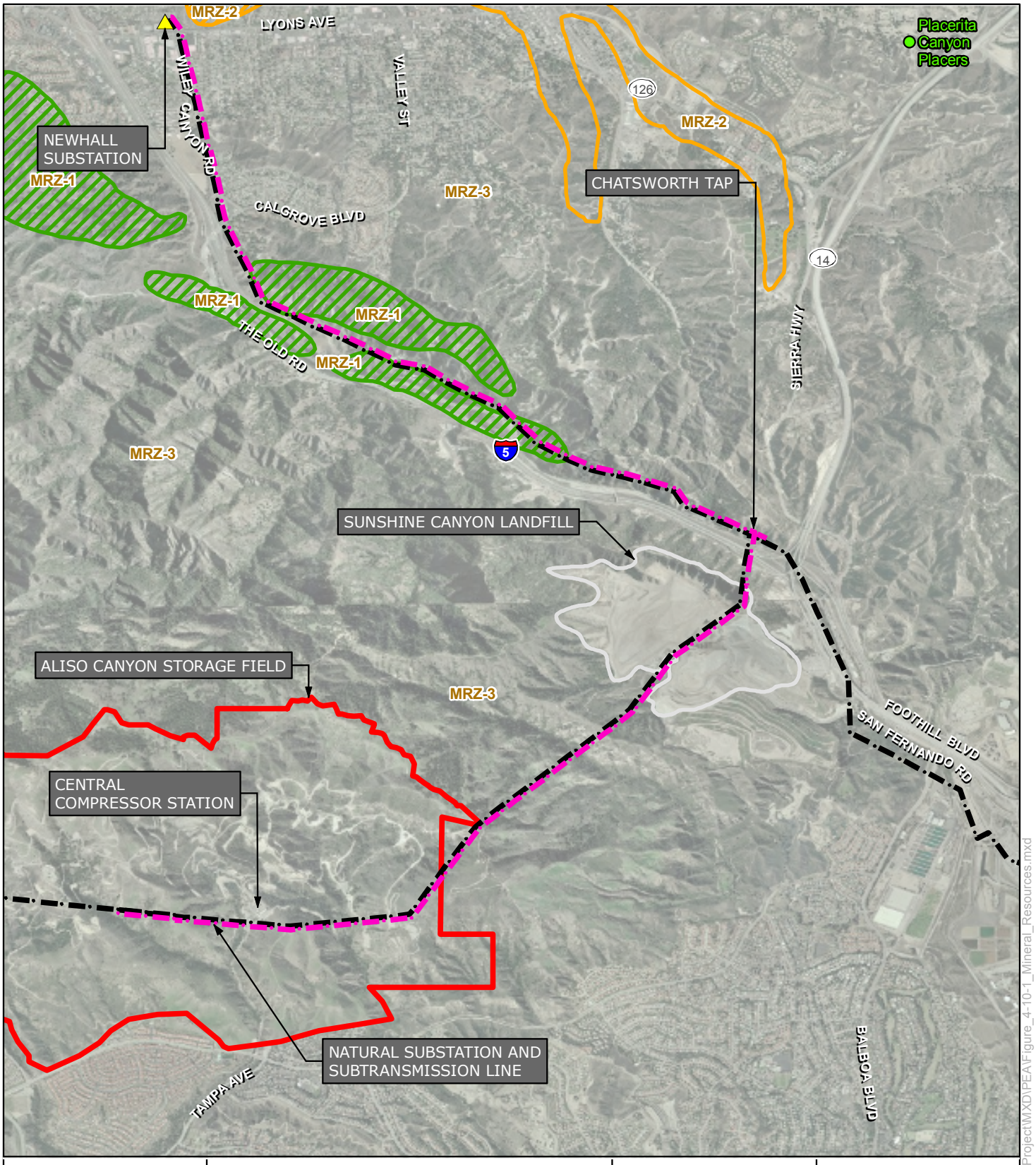
The primary mineral resources are the aggregate resources (sand, gravel and stone deposits). The nearest identified MRZ-2 zone, where significant deposits are known to exist which, per SMARA, warrant particular protection to insure the County a long-term supply of construction material, to the Proposed Project site is the Placerita Canyon Placers located ~ 6 miles to the northeast, represented in Figure 4.10-1.

The MRZ classifications are applied based on available geologic information, including geologic mapping and other information on surface exposures, drilling records, and mine data. The designations are also based on socioeconomic factors, such as market conditions and urban development patterns.

4.10.1 Existing Setting

The Proposed Project is located in a central portion of the Transverse Ranges Physiographic Province in western Los Angeles County, California. The Transverse Ranges are characterized by a predominantly east-west trending system of faults, folds, and mountain ranges (Dolan et al., 2001). The Proposed Project is located within the former Aliso Canyon Oil Field in the Mountains just north of the San Fernando Valley in Los Angeles County, California. The Proposed Project consists of the Newhall subtransmission station; the 66 kV alignment; the San Fernando subtransmission station; and seven locations within the Aliso Gas Storage Facility (Natural substation locations #1 and #2, the new compressor station, the new office trailer location, the Porter 32 and Porter 47 staging areas, the Porter 27 soil processing area and the Porter Fee Road staging area). The central compressor station lies ~ 0.8-mile north of Sesnon Boulevard, north of HW 118 at an elevation of ~ 1,850 feet above MSL.

The Aliso Canyon Oilfield was discovered by Tidewater Associated Oil Company in 1938. Since the date of discovery the cumulative production at Aliso Canyon oilfield exceeds 60 million barrels of oil and 80 billion cubic feet of natural gas. The Aliso Canyon facility is currently operated by SoCalGas as one of the 10 largest gas storage fields in the United States (Solimar Energy, 2008).



Map Location

Legend

- Proposed SCE 66 kV Modification
- Existing SCE 66 kV Alignment
- Existing SCE Substation
- Sunshine Canyon Landfill
- Aliso Canyon Storage Field
- Mineral Resource Zone (MRZ)
- MRZ-1
- MRZ-2

1 inch = 4,000 feet

0 4,000 8,000 Feet

N W E S

Aliso Canyon PEA

Figure 4.10-1
Nearest Mineral Resource Zone to Proposed Project

Source: USGS Mineral Resource Data System and CDMG, 1994, Plate 1B

Southern California Gas Company — A Sempra Energy utility

AECOM

Project: 06205-134
Date: September 2009

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The primary mineral resources of Los Angeles County are natural aggregates (sand, gravel), crushed rock and petroleum (oil and gas). These resources are important to the physical and economic development of the County.

Sand and gravel are typically used to produce the following materials:

- Portland-Cement-Concrete Aggregate (PCC-grade aggregate)
- Asphaltic-Concrete Aggregate (AC-grade aggregate)
- Road Base
- Railroad Ballast
- Rip-Rap
- Fill

Other minerals of commercial value are asphalt, clay, expansible shale, gypsum, limestone, and phosphate. Pursuant to the California SMARA of 1975, and its subsequent revisions, aggregate resources have been identified and mapped, and those areas designated MRZ-2 are areas where significant deposits are known to exist which, per SMARA, warrant particular protection to insure the County a long-term supply of construction material.

Oil and Gas Fields .

The Aliso Canyon structure is primarily a southeast-dipping nose with Pliocene oil zones trapped up dip to the north by the Santa Susana fault and to the west by the Frew fault. The deeper Miocene and Eocene productive oil sands are trapped up dip by the south dipping Ward reserve fault in the centre of the field. These deeper sands, known as the Sesnon and Frew sands are the primary gas storage zones in the main Aliso Canyon field (Solimar Energy, 2008).

An un-drilled fault block has been identified next to the Aliso Canyon Field which has produced 60 million barrels of oil and 180 million cubic feet of gas before being converted to a gas storage unit. Various oil companies have installed oil wells for petroleum withdrawal. These companies include Termo, Chevron, ExxonMobil, SoCalGas, etc. The oil field is currently being used as a gas storage field (Storage Field). The Toro Oil and Gas field is about 500 feet to the north of the site. The Oat Mountain Oil field is located to the northwest of the Proposed Project.

According to DOGGR, oil and gas exploration and pumping from proven reserves has occurred extensively within the Santa Susana Mountains. Numerous oil fields exist, to name a few, SoCalGas, Chevron U.S.A. Inc., ExxonMobil Corp., L. A. Ventura Oil Fields Co., Placerita Oil Co., and Porter Sesnon et al.

The Aliso Anticline was explored as a potential oil trap by drilling numerous exploratory borings within the area. The DOGGR's Regional Wildcat Map 254 for District 2 indicated that numerous wells are located within the Proposed Project. According to DOGGRs Wildcat Map # 254 and conversations with DOGGR personnel, the wells within the Proposed Project area and vicinity consist of idle, active and abandoned, and dry wells. A total of 242 oil wells have been identified within the entire area and zones other than the oil field are as follows:

- 134 active wells
- 47 inactive wells
- 56 abandoned oil wells

- 2 of unknown status
- 3 cancelled wells

The DOGGR's Regional Wildcat Map No. 254 indicates that 83 gas storage and injection wells are located within the storage zone. The locations of these gas wells are depicted on Figure 3.2-1. However the Storage Filed maintains an independent list of wells, which show a total of 116 injection/withdrawal wells, two observation wells, and two water disposal wells.

According to SoCalGas, the existing wells will not be impacted as a result of this Proposed Project nor is there any potential for significant hazards to occur to the environment. Also, there will not be any new injection/withdrawal wells constructed nor are there any abandoned gas wells on the Proposed Project site. No gas well abandonments are planned for the Proposed Project. There will not be any additional monitoring or test wells constructed as part of the Proposed Project.

According to DOGGR, Ventura office, the Aliso Canyon Oil field has specific permit requirements for the underground gas storage operations as addressed to SCG in their letter, entitled "Gas Storage Project, Aliso Canyon, Sesnon Frew Zone", dated April 18, 1989 (revised on July 26). Several conditions of the project operation are approved provided that:

- All injection piping, valves and facilities meet or exceed design standards for the maximum anticipated injection pressure and are maintained in a safe and leak free condition;
- The gas storage reservoir pressure shall not exceed 3600 psi. Tests may be required to establish that no damage will occur from excessive injection pressures; and
- DOGGR is notified of any anticipated changes in a project resulting in alteration of conditions that were originally approved, such as: increase in project size; increase in approved zone pressure; changes in injection-withdrawal intervals; changes in observation-collection intervals; or monitoring procedures.

Although AECOM requested copies of the active permits on file with DOGGR on June 10, 2009, no permits were provided.

4.10.2 Significance Criteria

The significance criteria for assessing the impacts to mineral resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

- Result in loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.10.3 Applicant Proposed Measures

There are no APM's associated with mineral resources.

4.10.4 Environmental Impacts

The potential impact to mineral resources from construction and operation of the Proposed Project was evaluated using the stated CEQA significance criteria and is presented in this section. For the purpose of presenting potential mineral resource impacts, CEQA criteria were evaluated and are discussed together for construction and operations.

Would the Proposed Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

According to the California DMG (1994), Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California, Part II Los Angeles County, the Proposed Project is located in MRZ-3 zone, an area containing mineral deposits the significance of which cannot be evaluated from available data.

There are no known mineral resource areas within the Proposed Project area. The two closest MRZ-2 Zones to the Proposed Project are:

- Placerita Canyon Placers is located ~ 6 miles to the northeast, as identified by the USGS Mineral Resource Data System.

- Calmat Company (Sheldon) is located approximately 10 miles to the southeast of the proposed Project, as identified by the DMG, Mineralized Land Classification Map, 1994., and is not shown on Figure 4.10-1 due to the scale of the Figure.

Therefore, the construction and operation of the Proposed Project would not result in any impacts to mineral resources.

Would the Proposed Project result in loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Los Angeles and Ventura Counties have identified several areas as MRZ-2 mineral resource protection zones, none of which are located in the Proposed Project. However, the Aliso Oil Field is located within the Proposed Project. Construction and operation of the Proposed Project would have no impact on the loss of availability of these locally important mineral resources (oil and gas). Therefore, the construction and operation of the Proposed Project would not result in any environmental impacts to mineral resources.

4.10.5 Mitigation Measures

The Proposed Project was determined to have **no impact** due to construction and operation; therefore no mitigation is required or proposed.

4.10.6 References

California Division of Mines and Geology (DMG), 1994, Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California, Part II Los Angeles County, Open File Report 94-14.

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