APPENDIX A

NOTICE OF PREPARATION AND INITIAL STUDY CHECKLIST AND COMMENT LETTERS RECEIVED

SOUTHERN CALIFORNIA GAS COMPANY'S APPLICATION TO VALUE AND SELL SURPLUS PROPERTY AT PLAYA DEL REY AND MARINA DEL REY

Initial Study

CPUC Application No. 99-05-029

September 2003

Prepared for
California Public Utilities Commission

ESA Environmental Science Associates

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202639

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EXECUTIVE SUMMARY

S.1 INTRODUCTION

Southern California Gas Company (SCG), in its California Public Utilities Commission (CPUC) application (A.99-05-029), proposes a sale of surplus SCG property in Playa del Rey (PDR) and Marina del Rey (MDR). This Initial Study considers environmental impacts from the potential development of the 36 lots that comprise these properties. All lots are designated for residential use except for one, which is designated for limited commercial use. If SCG's application is approved by the CPUC, SCG proposes to commence with the sale of the lots in 2004. Under Public Utilities Code Section 851, approval of the proposed sale must comply with the California Environmental Quality Act (CEQA) in order to assess the potential environmental impacts of the proposed project. Based on the assessment presented in this Initial Study, it is recommended that the CPUC prepare an Environmental Impact Report (EIR) for the proposed project.

As required by CPUC guidelines, the California Environmental Quality Act (CEQA) Initial Study Checklist was used as the format for describing potential impacts. The level of research and analysis provided is intended to satisfy the requirements to determine the need for an EIR pursuant to CEQA.

This document is organized as follows:

- This Executive Summary is provided to introduce the project and present the project description in brief as well as describe the approach to the analysis contained in the body of the document.
- The Impacts section documents all required CEQA checklist items and a discussion of those impacts and their significance.
- Appendices follow the Impacts. Appendix A contains detailed history and background information for each lot. Appendices B through I provide background information for air quality; biological resources; cultural and historical resources; geology and soils; hydrology and water quality; hazards and hazardous materials; land use; and noise.

S.2 PROJECT DESCRIPTION

The project area is located approximately 4 miles south of the city of Santa Monica, 1.5 miles north of the Los Angeles International Airport, 0.5 miles west of Culver City, and is bordered by the Santa Monica Bay to the west. PDR is located within the City of Los Angeles and MDR is located within the County of Los Angeles. MDR is approximately 2 miles northwest of PDR, separated by the Ballona Wetlands and the MDR Channel.

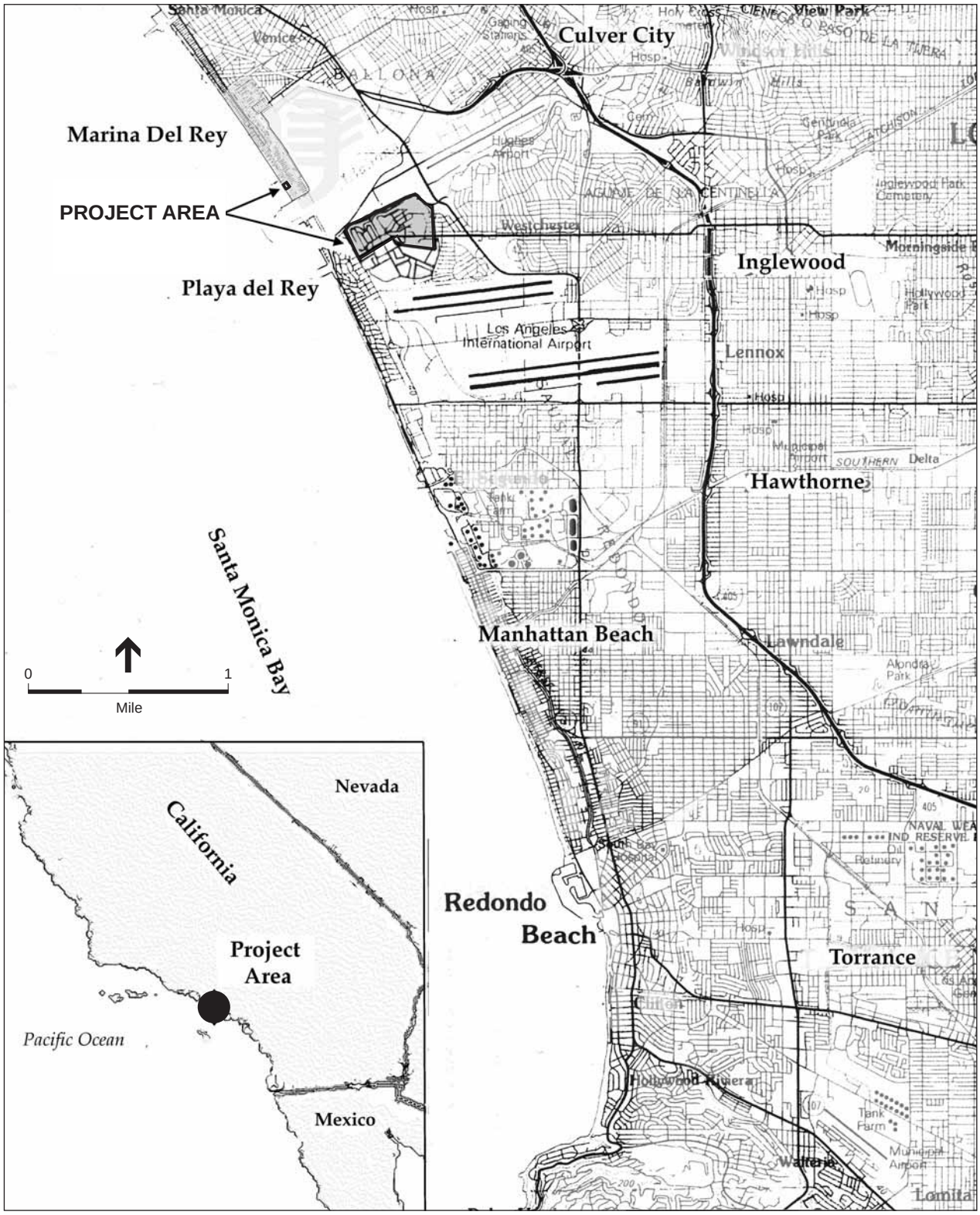
The 34 undeveloped lots proposed for sale located in PDR are grouped into lot clusters of one to eight lots (See Table 1). The two MDR lots represent a single cluster and are located approximately two miles north of PDR. There are 12 abandoned SCG wells located on the proposed project lot clusters (see Table 1). Each cluster (with typically two to four lots per cluster) contains one well. Cluster 1 contains only a single well located on a single lot. Cluster 8 has two wells, each associated with either the 4 north lots or the 4 south lots. Originally, SCG maintained ownership of these lots associated with those wells utilized as oil production wells and those converted for gas storage operations. In order to operate and maintain such wells, sufficient land around each well was required to support the transport and operation of heavy equipment used in well servicing. These 12 abandoned wells were once used as observation or monitoring wells for SCG's Playa del Rey Gas Storage Facility (PDRGSF).

TABLE 1
PROJECT LOTS AND RELATED ABANDONED WELLS

Cluster No. / Location	No. of Lots	Well Designation	Date Abandoned
Playa del Rey			
1) Corner of 81st/Berger Place	1	Anglo American	July 1958
2) North side of 82nd Avenue	2	Joyce 1	March 15, 1993
3) Corner of 83rd and Saran Drive	3	Lormar 1	December 1, 1992
4) 85th Street	2	O and M 1	April 1956
5) Saran Drive	1	Hisey 1	November 9, 1992
6) Manchester Avenue	3	Merrill 1	September 24, 1992
7) 83rd Avenue Middle of 81st−82nd	5	13-1	October 2, 1992
8) 79th and 83rd	8	23-1	July 14, 1993
9) 83rd Avenue (Western 83rd)	4	Samarkand 1	December 8, 1992
10) Falmouth / Calabara Avenue	3	29-2	July 26, 1994
11) Falmouth / Calabara Avenue	2	29-1	August 4, 1994
Marina del Rey			
12) Union Jack / Speedway	2	Troxel 1	March 15, 1994

SOURCE: Brown and Caldwell (2002)

A general project location is shown on Figure 1 and an aerial photograph of the property and surrounding area is presented in Figure 2. See Figures 3 and 4 for the mapped locations of the PDR and MDR lots. See Appendix A for an expanded description of the lots and abandoned wells.



SOURCE: Environmental Science Associates

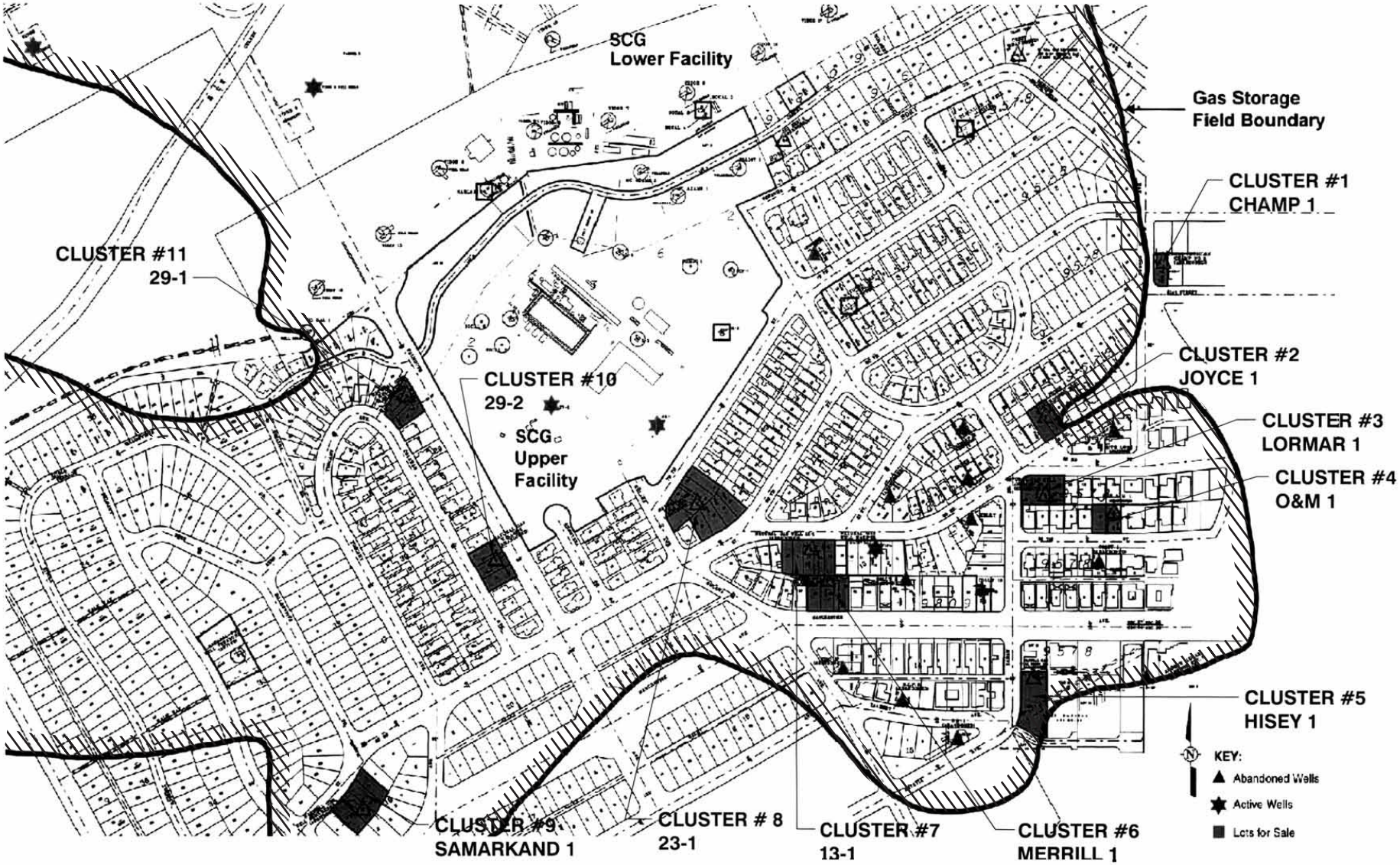
SCG Valuation and Sale of Surplus Property at Playa del Rey and Marine del Rey Project / 202639 ■

Figure 1

Project Vicinity Map

SOURCE: Environmental Science Associates

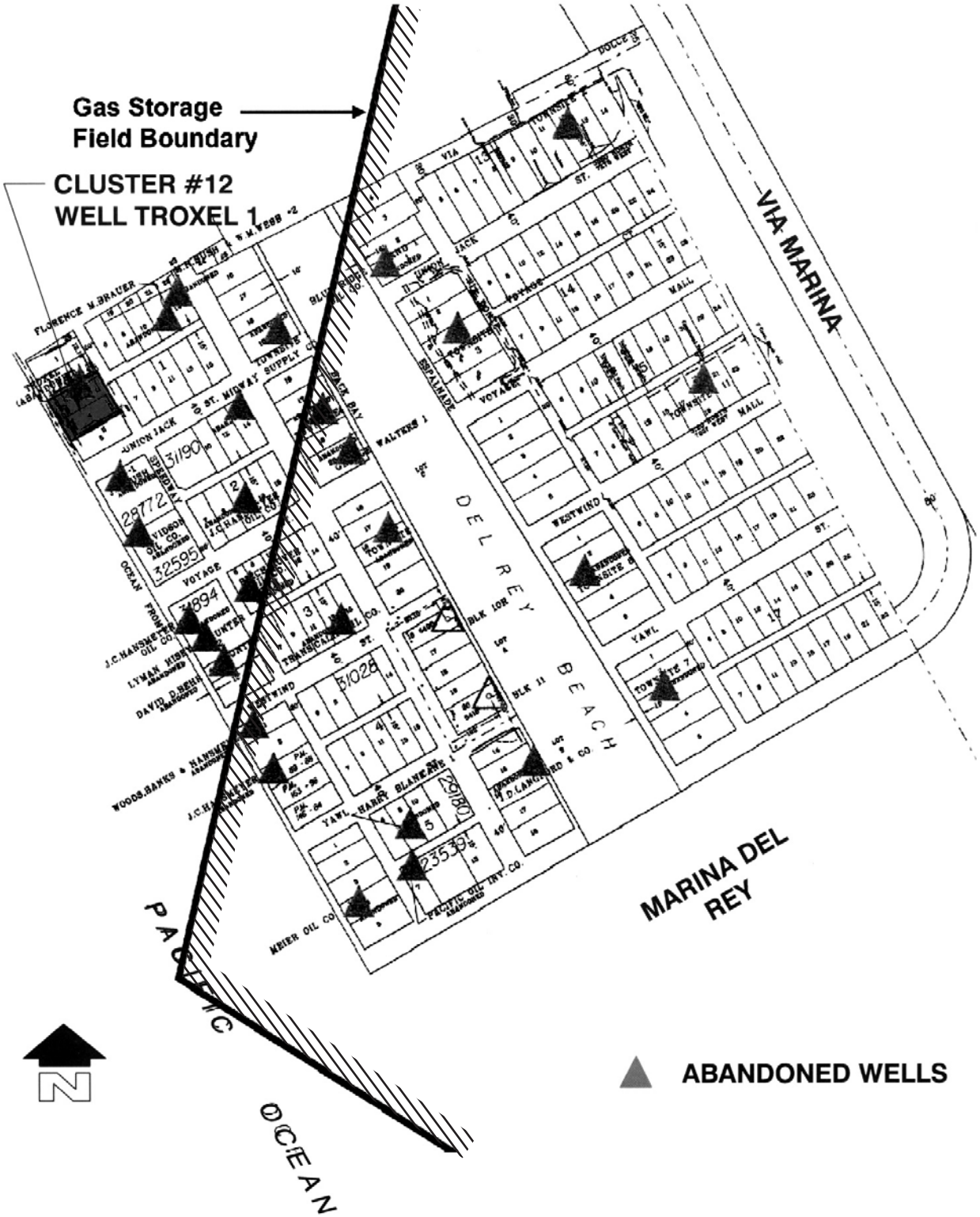
Figure 2
Aerial Map of Project Area



SOURCE: Environmental Science Associates

Figure 3

Annotated Site Map - Playa Del Rey



SOURCE: Environmental Science Associates

Figure 4

Annotated Site Map - Marina Del Rey

Under the proposed project, SCG would sell the undeveloped lots to 4 different buyers. One buyer would purchase a single lot, while the other three would acquire the remaining 11 clusters of 35 lots.

S.3 HISTORICAL BACKGROUND

All lot clusters overlie the existing SCG PDRGSF as shown on Figures 3 and 4. This gas storage field lies approximately 6000 feet below ground surface and has had an extensive history of activity in the 20th century. Oil drilling in the PDR / MDR region began as early as 1921. Early holes drilled and abandoned in the area during 1925 and 1926 were not deep enough to reach the oil producing zones. The discovery well for PDR Oil Field was completed in 1929. Primary field development continued through the mid-1930s. By the early 1940s, production had reached its economic limit and operators abandoned oil production from the field.

In 1942, as part of the national war effort, the Federal government condemned and took possession of approximately 240 acres of the PDR field area to use as a natural gas storage field. This gas storage field was later transferred to the Reconstruction Finance Corporation in 1945. Then, in 1953, the Reconstruction Finance Corporation declared the field surplus and offered for sale in 1953. SCG was the successful bidder and assumed operations in late 1953. Facilities were completed in 1956, and then gas was injected and stored at depths of about 6,200 feet within the Conglomerate Trap Zone. By July 1958, approximately 27 billion cubic feet (bcf) of cushion gas was stored. Since that time, numerous wells have been utilized for storage and retrieval of the gas. Currently, the storage field is operated through 54 wells directionally drilled from the lowlands and hilltop of PDR. Of these 54 wells, 25 are injection/withdrawal wells used to inject and extract gas, 8 are liquid (primarily water) removal wells, 3 are lateral migration wells to control gas movement, and 18 are observation wells used to monitor pressure and liquid saturation. SCG's Facility for the PDRGSF is 0.2 mile north of Manchester Avenue.

Originally, the wells and associated lots described in this document were used or could have been used for monitoring of gases and liquids in the storage zones (6000 ft below ground surface). Similarly, these wells and lots may be developed for later use if needed for the gas storage system. As shown on Table 1, all 12 wells considered in this document have been abandoned some years ago. Today, the lots provide no useful or commercially viable contribution to the operations and maintenance of the SCG PDRGSF. SCG believes that their remaining wells and facilities are adequate to allow for continued operations of the PDRGSF following the proposed sale of the 36 lots.

S.4 APPROACH TO ANALYSIS

The scope of the environmental analysis described in this document assumes that sale of the 36 lots is approved. Furthermore, the proposed sale of the lots is considered to have a reasonably foreseeable future connected action, which includes the eventual conversion to developed urban land uses consistent with existing zoning, and adjacent land uses. For the purposes of this document, this future connected action is considered to be the construction and occupancy of

residential property on most of the lots.[1] Note that the proposed and connected action is not related to the continued operations of SCG's gas storage facilities or related systems. It is also considered that the property transfer (sale) requires compliance with all applicable environmental laws, permits, and approvals and such requirements be made a condition of any sale.

PROJECT OWNERSHIP TRANSFER AND CONDITIONS

Sale of the SCG lots would generally result in the "clean and clear" of the site(s) for all locations, or cleanup of each site to a level suitable for the new qualified owner(s). The following discussion clarifies the transfer methods and conditions for the future owner(s).

CONDITIONS OF OWNERSHIP TRANSFER

Per SCG's sale agreement, the lots are to be sold "as-is" and do not carry any action for future development. Sub-surface and mineral rights would be retained by SCG and would not be included in the sale. SCG would be obligated, in perpetuity, to mitigate for any potentially adverse effects the wells may have on future beneficial uses of the surface rights associated with these lots. Mitigation measures proposed in the EIR and other CPUC conditions would be required as part of any sales agreement because any mitigation measure required to be complied with by subsequent property owner(s) are not subject to CPUC review and authority, since after the transfer of property the CPUC has no further oversight authority with the lots.

LIABILITY

A thorough environmental investigation would be performed prior to transfer of the property. New qualified owner(s) would be provided with the documentation from an independent environmental consultant detailing the conditions found, and any remaining cleanup not completed. New qualified owner(s) would also be provided with adequate time to complete their own investigation if they desire to do so. New qualified owners would have the right to terminate the purchase agreement if conditions found are different from those represented by SCG. The sales agreement specifies that the properties would be sold "as is," with the new qualified owner(s) assuming all liability for cleaning up any remaining contamination from past use of the property. The new qualified owner would indemnify SCG and its ratepayers from any future liability for contamination found on the property after the sale.

SCG would pre-qualify prospective owners to ensure that they have adequate resources to ensure that liability does not revert back to SCG and the ratepayers due to financial failure of the purchaser. SCG would evaluate the new qualified owners(s) to determine if there is a corporate structure that could cause liability to revert back to SCG and the ratepayers. If SCG has other concerns about the new qualified owner's future ability to carry out any remaining cleanup of the properties, SCG may require the new qualified owner(s) to provide financial assurance (such as environmental insurance) with SCG as the beneficiary in the event that the new qualified

[1] One of the lots (Cluster 5) is zoned for commercial uses and that property would be expected to be developed for such uses.

owner(s) fails to comply with laws and regulations or otherwise defaults on its obligations under the sales agreement.

ENVIRONMENTAL COMPLIANCE

Compliance with all applicable environmental laws, permits, and approvals would be made a condition of any sale to a new property owner. SCG would disclose to the prospective purchaser(s) any areas which SCG suspects could be contaminated with hydrocarbons or other substances and/or areas with past contamination that have been remediated.

S.5 ENVIRONMENTAL CHECKLIST FORM

1. Project Title:	Southern California Gas Sale of Surplus Property at Playa del Rey (PDR) and Marina del Rey (MDR)
2. Lead Agency Name and Address:	California Public Utilities Commission 505 Van Ness Avenue San Francisco, California 94102
3. Contact Person and Phone Number:	Roosevelt Grant Project Manager (415) 355-5492 (415) 703-2200 (fax)
4. Project Location:	Playa del Rey and Marina del Rey, (Los Angeles), California
5. Project Sponsor's Name and Address:	Southern California Gas Company 8141 Gulana Avenue Playa del Rey, California 90293 (310) 578-2689
6. General Plan Designation:	All but one of the 36 lots is designated for residential use and one is designated for limited commercial use.
7. Zoning:	Thirty lots are R1-1 (Single-family residential), five lots are R3-1 (Multi-family residential), and one lot is CR-1 (Commercial)
8. Description of Project:	See PROJECT DESCRIPTION (Section S.2).

9. Surrounding Land Uses and Setting:

The project area is located approximately 4 miles south of the City of Santa Monica, 1.5 miles north of the Los Angeles International Airport, 0.5 miles west of Culver City, and, is bordered by the Santa Monica Bay to the west. PDR is located within the City of Los Angeles and MDR is located within the County of Los Angeles. MDR is approximately 2 miles northwest of Playa del Rey, separated by the Ballona Wetlands and the MDR Channel.

The project involves two areas on the north and south sides of Ballona Lagoon in existing developed urban areas. The lots have no access to Ballona Lagoon, the Ballona wetlands, or other sensitive areas, with the exception of the ocean frontage associated with the two lots in MDR.

10. Other public agencies whose approval is required:

Division of Oil, Gas, and Geothermal Resources (DOGGR)
South Coast Air Quality Management District (SCAQMD)
City of Los Angeles
Los Angeles Fire Department
County of Los Angeles
County of Los Angeles Sanitation Department
California Occupational Health and Safety Administration (CalOSHA)
Regional Water Quality Control Board (RWQCB)

S.6 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Energy
☒ Geology / Soils	☒ Hazards & Hazardous Materials	☒ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☒ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	
	☒ Mandatory Findings of Significance	

DETERMINATION: (To be completed by Lead Agency)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Rob Feraru, Assistant Director of Energy Division

IMPACTS DISCUSSION

EVALUATION OF ENVIRONMENTAL IMPACTS

The determination of whether a project may have a significant effect on the environment is a critical step in the CEQA process. Consistent with *CEQA Statutes Section 21083* (SignificanceGuidelines) and *CEQA Guidelines Section 15065* (Mandatory Findings of Significance), significance levels as provided in the checklist are generally defined as follows:

- *Potentially Significant Impact* applies where there is substantial evidence that an effect may be significant. The CEQA Guidelines define "significant effect" as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant" (CEQA Guidelines, 15382).

- *Less than Significant with Mitigation Incorporated* applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The EIR must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level.

- *Less Than Significant Impact* applies where the project creates no significant impacts, only less than significant impacts.

- *No Impact* applies where a project does not create an impact in that category. "No Impact" answers need to be adequately supported by information which shows that the impact simply does not apply to project.

I. AESTHETICS

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
I.	**AESTHETICS—Would the project:**				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

SUMMARY

All likely aesthetic impacts of the project are considered to be less than significant, as the potential development of these lots would be assimilated with the existing surroundings of the neighborhoods. Therefore, impacts to aesthetics will not be considered further in the EIR.

A brief description of the clusters and associated lots is provided below. Figures I-1 through I-12 provides photo documentation of each of the clusters and associated lots (see Appendix A for a brief description of the lots).

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project have a substantial adverse effect on a scenic vista?

Future development of the 34 PDR lots would minimally affect the current vistas of the residential areas adjacent to the lots for sale. All but four of the lots are located on level topography or have minimal slopes; therefore, construction activities and resulting residential structures would primarily affect the vistas of neighboring residential structures. Development would change the current character of the lots but would not change the character of the surrounding residential neighborhood, as new developments would be consistent with surrounding residential zoning. Therefore, impacts on scenic vistas would be less than significant.

Figure I.1 - Cluster 1 - Lot 6 on the Corner of 81st Street and Berger Place

Figure I.2 - Cluster 2 - Lots 3, 4 on 82nd Street

Figure I.3 - Cluster 3 - Lots 14-16 on 83rd Street

Figure I.4 - Cluster 4 - Lots 6, 7 on 85th Street

SOURCE: Environmental Science Associates

Figure I.5 - Cluster 5 - Lot 11 on Saran Drive

Figure I.6 - Cluster 6 - Lots 14-18 on 83rd Street

Figure I.7 - Cluster 7 - Lots 28-30 on Manchester Avenue

Figure I.8 - Cluster 8 - Lots 17-20 on 79th Street and Lots 82-85 on 83rd Street

SOURCE: Environmental Science Associates

Figure I.9 - Cluster 9 - Lots 5, 6, 7, 8 on 83rd Street

Figure I.10 - Cluster 10 - Lots 5, 6, 7 on Calabara Avenue

Figure I.11 - Cluster 11 - Lots 18, 19 on Calabara Avenue

Figure I.12 - Cluster 12 - Lots on Speedway in Marina del Rey

SOURCE: Environmental Science Associates

Future development of the two lots in MDR would change the current vista along the strip of Venice Beach where the lots are located. Development of these lots may partially block the views of surrounding residential structures, including those adjacent to the lots on Union Jack street and those directly behind the lots on Speedway Avenue. In particular, buildings located directly behind the MDR lots on Speedway Avenue would likely have their views of Venice Beach and the Pacific Ocean blocked by new development on the lot. Views from Ocean Walk would be changed with the additional development. However, because the MDR lots are zoned for residential use the new development would be in character with the surrounding residential area. Therefore, impacts on scenic vistas would be less than significant.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

All of the PDR lots contain vegetation, including trees and grass. It is likely that many of the trees would be removed during construction activities. It can be assumed that some of the trees would be removed during construction and the resulting landscaping around the new homes would be similar to other yards in the neighborhood. Although there would be an impact on the scenic resources in the area, such a change in landscaping would be consistent with surrounding land uses. Therefore, impacts to scenic resources would be less than significant.

The MDR lots are covered by sand and sparse vegetation. There are no trees or rock outcroppings on the MDR lots. Therefore, future development of these lots would not result in removal of a significant number of trees, rock outcroppings, etc. There would be no impact to scenic resources at the MDR lots.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Future development would change the appearance of the 34 PDR lots from scattered open spaces to residential structures. Development of the lots would consist primarily of in-fill development of residential uses in an established residential neighborhood. Development of the PDR lots would be consistent with their current zoning (30 lots are zoned for single-family residential use, three lots are zoned for multi-family use, and one lot is zoned for residential/commercial use). Vegetation and trees would likely be removed from most of the lots and replaced with single- or multi-family homes and landscaped yards. One parcel could be developed with a commercial use under the current zoning. New fencing would also change the existing character of the lots. Although development would visually change the appearance of the lots from that of scattered open spaces and mature vegetation to residential (or commercial) uses, this is not considered to be a degradation of the visual quality of the sites or their surroundings as the development would be consistent with the surrounding area and zoning ordinances. Therefore, the impact on the visual quality of the site would be less than significant.

Development of the two MDR lots would change the visual character of this strip of land along Venice Beach. These adjacent lots provide a visual break with the neighboring residential developments. Although development of the lots would mean a loss of open space amongst dense apartment structures, it would be consistent with surrounding land use. Therefore, the impact on the visual character of the site would be less than significant.

d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Future development of the PDR and MDR lots would create additional street and structural related lighting in the area. Although the addition of new structures would increase local glare, development lighting and glare would be similar to existing light sources and be consistent with the light and glare continuity of the neighborhood. The new structures would not result in a substantial increase in light or glare and would not adversely affect day or nighttime views in the area. Therefore, the impact on light or glare would be less than significant.

II. AGRICULTURAL RESOURCES

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
II.	**AGRICULTURE RESOURCES** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. **Would the project:**				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

SUMMARY

The proposed project would have no impact on agricultural resources because there are no agricultural resources present at the site vicinity. Therefore, agricultural resources will not be considered further in the EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

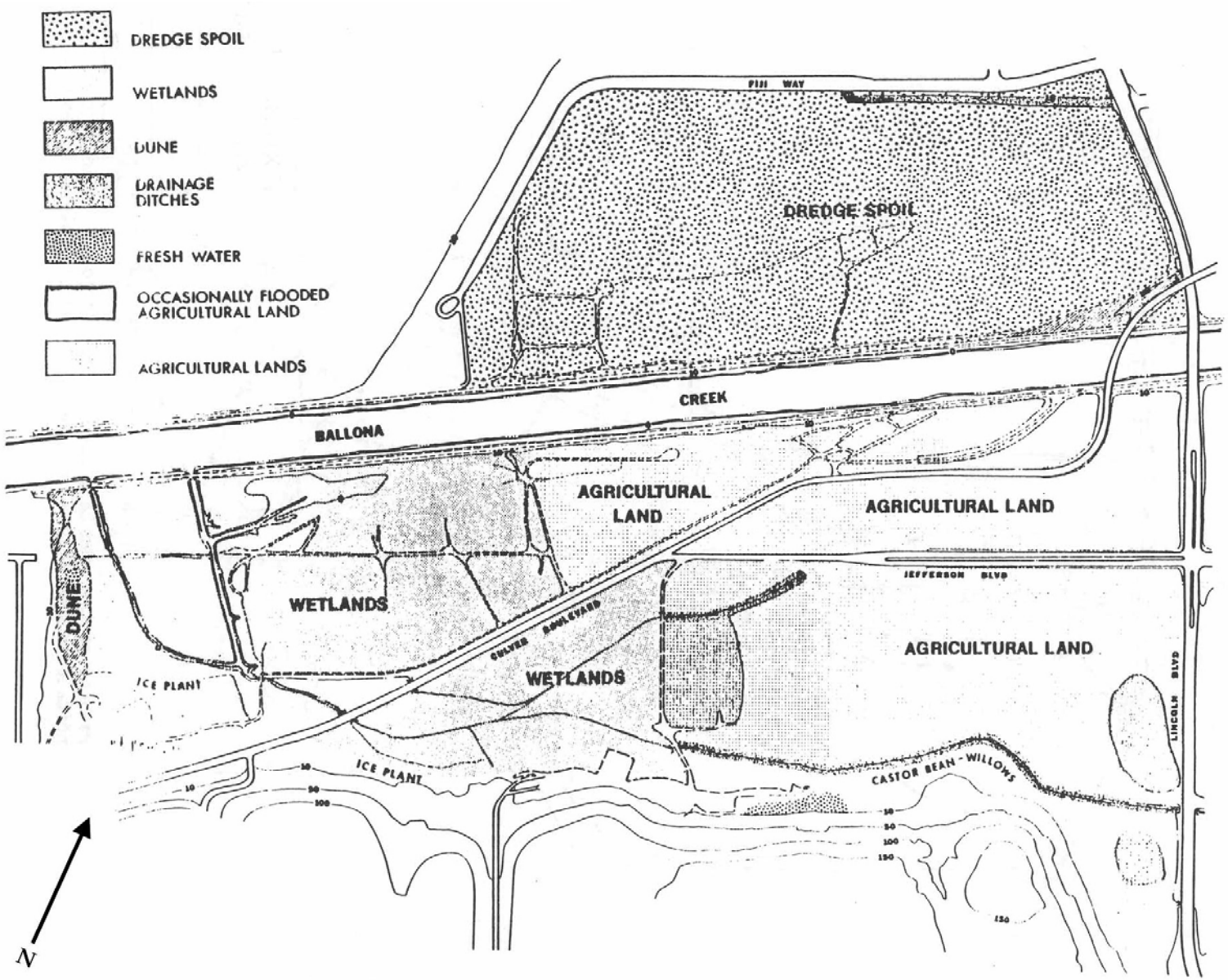
While the County of Los Angeles contains abundant agricultural resources, the communities of PDR and MDR do not possess active agricultural lands. PDR is a coastal community, within the jurisdiction of the City of Los Angeles, predominately comprised by single-family homes. The area surrounding the PDR lots is dominated by residential and recreational uses. The residential portion of the community lies within the jurisdiction of the City of Los Angeles, whereas the marina is an unincorporated area within the County of Los Angeles.

Historical records of agricultural use for the PDR lots indicate the site was farmed through the 1930s; prior to the time that the property was purchased in the early 1940s (see Figure II-1). Since the 1940s, the acreage committed to agriculture in the portion of the property outside the coastal decreased gradually as development expanded. In 1970 a private resident began farming the property; no new acreage has been opened to farming use since that time (California Coastal Commission, 1983).

The 34 scattered lots throughout the PDR neighborhood and the two lots in the MDR have no classified soil suitable for nursery or other agricultural uses. The project would not impact Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The PDR and MDR lots are not zoned for agricultural use and a Williamson Act contract is not in place for the project area. Sale of the lots and subsequent development of the lands for urban uses would therefore not result in uses inconsistent with agricultural zoning nor in conflict with lands under Williamson Act contract.



SOURCE: Environmental Science Associates, USGS, Pacific Meridian Resources

Figure II-1

Playa del Rey/Ballona Region Circa 1930s

c) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?

The PDR and MDR lots are not located on or near lands that are considered farmland by state, regional or local agencies. Sale of the lots and subsequent development of the lands for urban uses would not result in uses inconsistent or detrimental to existing or future agricultural activities in the area nor would the sale or subsequent development promote or accelerate the conversion of such existing agricultural lands to non-agricultural uses.

III. AIR QUALITY

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
III.	**AIR QUALITY** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐

SUMMARY

The proposed project presents potentially significant air quality related impacts from potential exposure of sensitive receptors to methane and odor impacts from potentially leaking wells of the PDRGSF. These impacts will be analyzed and considered in greater detail in the EIR with the addition of new field sampling data currently being collected.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix B for an extensive background analysis of the Air Quality resource.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Air emissions in the South Coast Air Basin (SCAB) are regulated by the South Coast Air Quality Management District (SCAQMD). Pursuant to the federal Clean Air Act (CAA), the SCAQMD is required to reduce emissions of criteria pollutants for which the SCAB is in non-attainment. Strategies to achieve these emissions reductions are developed in the Air Quality Management Plan (AQMP) prepared by SCAQMD (1997) for the region. Chapter 3 of the 1997 AQMP states, "future emissions forecasts are based on demographic and economic growth projections provided by the Southern California Association of Governments (SCAG)." Individual projects and long-term programs within the region are required to be consistent with population, employment, and housing projections.

Currently, the City of Los Angeles is updating the Westchester Community Plan and General Plan Framework. The update to the Westchester Playa Del Rey Community Plan and General Plan Framework Element plans for a population increase of 42,586 people over the next twenty years. The population increase would lead to a planned increase of 24,443 housing units in the Plan area.

Development of the PDR and MDR lots would provide as many as 80 housing units. Development associated with the property sale is accounted for in the Community and General Plan Framework. Development of the property would construct less than one percent of the planned homes for this community plan area. According to demographic projections, development arising from the sale of the subject properties would be consistent with SCAG housing projections and as such would be consistent with the AQMP.

The SCAQMD (2000) Air Toxics Control Plan is intended to protect the public from possible sources of air toxics emissions. Future development on project lots, if performed on top of the abandoned oil and gas wells, could impede access to controlling any potential future leaks from these wells and potentially result in a release of air toxics. However, given the history of oil and gas development in the project area it is not uncommon at all for structures to be installed on abandoned oil and gas well sites. With proper well abandonment procedures and compliance with any required protection measures for construction atop such facilities, no planning inconsistencies should occur. Development associated with the proposed project would not conflict with or obstruct implementation of applicable air quality plans and therefore would represent a less than significant impact.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The primary project impact would derive from sources of air emissions associated with homes or commercial buildings built upon the 36 lots. Emissions sources would include stationary and mobile sources. Stationary sources of emissions include onsite emissions generated as a result of the combustion of natural gas and off-site emissions resulting from an increased electrical energy demand. Stationary source emissions would contribute an insignificant amount to local operational emissions when compared to mobile sources of emissions. Mobile source emissions are motor vehicle emissions and would be the largest source of pollutants that would result from the implementation of the proposed project.

The SCAQMD has established emissions significance thresholds for construction and operational emissions. For planning purposes, the SCAQMD has published screening tables for operations to assess potential significance for air quality.[2] The SCAQMD has established a threshold for potentially significant air quality impacts at 166 housing units. The proposed project could lead to the addition of up to 80 housing units. According to the SCAQMD CEQA Air Quality Handbook, operational emissions associated with the addition of 80 housing units would not be anticipated to result in a significant impact to air quality.

The SCAQMD has established air emissions thresholds associated with construction projects. Construction related emissions would primarily be, 1) dust generated from grading and excavation; 2) hydrocarbon emissions from paints and asphalt; 3) exhaust emissions from powered construction equipment; and 4) motor vehicle emissions associated with construction activities. Construction on the individual parcels could occur over a wide or narrow time frame depending on the individual developer's time schedules. A worst-case scenario would involve the simultaneous development of all project parcels.

For planning purposes, the SCAQMD has published screening tables for construction projects to assess potential significance for air quality.[3] The SCAQMD has established a threshold for potentially significant air quality impacts at 1,309,000 square feet of construction per three-month period. Assuming that each house would be 3,000 square feet, the proposed project could lead to the total construction of 240,000 square feet of residential properties. As the proposed project would not exceed screening table thresholds, construction associated with development of the lots would not be anticipated to result in a significant impact to air quality. Development of the PDR and MDR lots would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would be a less than significant impact.

Although the proposed project, based on this screening analysis represents a less than significant impact, SCAQMD CEQA rules require that this impact be considered further in greater detail and quantification of potential construction and operation emissions as well as any mitigation measures in the EIR (SCAQMD, 1993).

2 SCAQMD CEQA Air Quality Handbook, 1993, Table 6-2. Screening Tables for Operation-Daily Thresholds of Potential Significance for Air Quality.

3 SCAQMD CEQA Air Quality Handbook, 1993, Table 6-3. Screening Tables for Construction-Quarterly Thresholds of Potential Significance for Air Quality.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

The same threshold levels comprising a "substantial" contribution to an existing, or projected air quality violation in checklist item "b" above would also apply to a "cumulatively considerable net increase." The project is located in a non-attainment area for ozone, carbon monoxide and particulate matter. Any increase in precursor pollutants from cumulative growth would be potentially adverse. While the impact from this single project would be well below SCAQMD significance thresholds, cumulative impacts can potentially result from the addition of hundreds of small projects that exacerbate the basin's inability to meet clean air standards. The proposed project is not expected to exceed SCAQMD significance criteria for construction or operational activities. As such, the addition of as many as 80 housing units would not cumulatively impact air quality on a regional scale. Development of the PDR and MDR lots would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or state ambient air quality standards and is therefore a less than significant impact.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. SCAQMD (1993) includes in its list of sensitive receptors that includes:

- Residences
- Schools
- Playgrounds
- Childcare centers
- Convalescent homes
- Retirement homes
- Rehabilitation centers
- Athletic facilities

Sensitive population groups include:

- Children
- Elderly persons
- Acutely and chronically ill persons (especially those with cardio-respiratory diseases)

Residential areas are also considered to be sensitive to air pollution because residents tend to be home for extended periods of time, resulting in sustained exposure to any pollutant present. Given the existing land uses (predominately residential) in the PDR and MDR area, all properties adjacent to the project lots meet this criteria for sensitive receptors and are considered in this study as such.

All project lots are located in residential neighborhoods and are surrounded by residential properties. If the abandoned oil or gas wells on the lots were to leak, new residents living on the project lots could be exposed to elevated pollutant levels that could possibly and occasionally exceed Ambient Air Quality Standards. It is also possible that some new PDR lot owners could be exposed to emissions from ongoing operations or accidental releases of methane at the nearby PDRGSF. However, this potential impact is actually a baseline condition and not considered a direct impact of the proposed project.

There are three potential exposure scenarios that may expose sensitive receptors to substantial pollutant concentrations:

1) Existing receptors may be exposed to elevated levels of diesel particulate matter during construction activities.

2) Construction atop abandoned oil and natural gas wells could cause off-site migration of sub-surface gases that could expose sensitive receptors to toxic or explosive gasses associated with potentially leaking abandoned well-heads.

3) Normal operations at the PDRGSF or unplanned releases of toxic contaminants from the PDRGSF or any associated well-heads could expose new residents of the sale lots to potentially toxic air contaminants.

The following is a break down of each of these exposure scenarios.

Construction Activities

The use of heavy-duty diesel engines at the project sites could expose nearby residents to diesel particulate matter. Diesel particulate matter is a chemical known to the State of California to cause cancer in certain concentrations. Due to the relatively short-term exposure, nearby residents likely would not be exposed to substantial pollutant concentration. As such, construction at the project sites is not expected to expose existing sensitive receptors (nearby residents) to substantial toxic air contaminants.

During construction of future buildings on the projects lots, digging activities could cause a release of gas from the abandoned wells through the accidental damaging of the buried well heads. With proper marking of the abandoned wells and consideration of placement of future structures on the lots, it is unlikely that this potential impact would occur. This potential impact is further discussed in Section VII, *Hazards and Hazardous Materials*. Likewise, this potential impact and any potential mitigation measures to ensure avoidance of possible damage to buried well heads will be considered further in the EIR.

Offsite Migration of Subsurface Gasses

The foundations of new structures placed atop the abandoned oil and gas wells have the potential to force subsurface gasses from any leaking wells to migrate laterally under the building foundations or parking lots. While the extent of this migration depends greatly on

a number of factors which include the amount of gas released and the measures used to seal the foundation, this circumstance has the potential to expose sensitive receptors that would normally not be exposed.

One study (Giroux, 2001) has been performed at two Clusters to assess the potential of methane migration at the project lots. While the initial testing concluded that subsurface migration was not occurring, the two locations where testing occurred may not be indicative of other sites and therefore the collected data cannot be interpolated to the remaining sites. Additional testing (including testing for methane, soil contamination and soil gas) of the sale lots will be performed over the next few months. Because there is no current evidence supporting the presence or absence of offsite migration of subsurface gasses, this analysis assumes that the potential exists to expose sensitive receptors to substantial pollutant concentrations from offsite migration. Results of further testing will evaluate the actual significance (if any) of offsite gas migration at the sale lots both in the vertical and the horizontal offsite directions. Health hazards associated with the gas migration is further analyzed in Section VIII, *Hazards and Hazardous Materials*.

PDRGSF Operations

Future residents located nearby the PDRGSF could occasionally be exposed to elevated pollutant concentrations from emissions associated with the ongoing operations or emergency or accidental releases of gases at the PDRGSF. However, this potential impact is a baseline condition and would not be considered a project related impact. These emissions would be similar to emissions currently experienced by existing residents living close to the SCG main facility or the neighborhood well sites. The greatest potential for exposure to unintentional releases of pollutants and odors from the proposed project would be to new residents located in the neighborhoods closest to the PDRGSF, in the vicinity of Falmouth Street, 79th Street, and Veragua Street. As is discussed in item e) below, there have been reported releases of methane from the PDRGSF and it is reasonable to assume that there will be releases in the future as well.

In addition, residents could be temporarily disrupted by activities associated with California Division of Oil, Gas and Geothermal Resources (DOGGR)'s rechecking of abandoned wells prior to issuance of building permits for those lots which have unused wells beneath the ground surface.

Thus, potential methane releases resulting from PDRGSF operations do not represent an impact of on the proposed project area and will not be considered further in this study.

Two of these three potential exposure scenarios represent potentially significant impact to new residents of the sale lots. At the level of detail considered in this Initial Study these scenarios must be considered potentially significant, even though it may be possible to mitigate these impacts. Additional analysis and additional field data collection will be presented in the EIR to both quantify these impacts and develop (if necessary) suitable mitigation measures.

e) Would the project create objectionable odors affecting a substantial number of people?

It is unlikely that as a result of the sale or development of the lots, that natural gas (the principle project-related odor source) would be released. However, if the gas abandoned well were to leak during construction activities (as is discussed in item "d" above) or later during future occupation of the project lots, new and existing residents could be exposed to objectionable odors. Odors due to natural gas are primarily associated with hydrogen sulfide, which is sometimes a component of natural gas, and mercaptans, which are added to natural gas for safety purposes. Odors, while not toxic at low levels, represent a nuisance to the public. Additional field testing is currently underway to determine to what extent the projects lots represent potential odor sources.

Currently, it is not clear whether placement of new buildings on abandoned wells would cause an odor impact to nearby sensitive receptors. To this end, additional subsurface and surface testing is currently underway to identify the presence or absence of any existing migration pathways and to assist in the development of mitigation measures to reduce any resulting significant impact to a less than significant level. This potential project-related impact will be considered and analyzed further in the EIR.

Although not considered a project-related impact, new residents of the PDR lots could be exposed to natural gas through accidental or emergency releases of gas from the PDRGSF or from associated operational well heads. Currently, odors related to PDRGSF operations are reported as noticeable in the PDR area. The SCAQMD defines odors that are perceptible to more than 10 residents from any single event as a significant impact.[4] The SCAQMD has investigated 60 odor complaints (SCAQMD, 2003) at the PDRGSF since 1988. The PDRGSF does release gas on an as-needed basis from its vent systems, and experiences fugitive leaks from valves, flanges and other piping at the facility. The complaint frequency is strongest downwind of the facility during light morning on-shore breezes. The addition of new residences to the local area could cause an increase in the number sensitive receptors exposed to gas releases and the associated odors. While the development of the lots is not expected to increase the likelihood of odor releases from the PDRGSF, development would increase the number of people exposed to any objectionable odor.

In summary, while the sale of the lots is not expected to contribute to odor emissions, the sale lots themselves may represent odor sources and thus represent a potential impact. Furthermore, the addition of sensitive receptors (new residents) to the project area could expose in excess of ten additional sensitive receptors to objectionable odors. These odor impacts are considered potentially significant and will be considered and analyzed further in the EIR along with potential mitigation measures to reduce the odor impact to less than significant.

[4] Telephone conversation with Michael Krause of the SCAQMD CEQA Section, May 20, 2003.

IV. BIOLOGICAL RESOURCES

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
IV.	**BIOLOGICAL RESOURCES— Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

SUMMARY

The initial review suggests that some significant biological changes could occur as a result of the future development, thus, the project could result in present potentially significant impacts to biological resources. These impacts will be analyzed and considered in the EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix C for preliminary research on Biological Resources in the PDR area.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

If Cluster 9 of the PDR and/or the MDR lots were developed, the development could potentially affect *special status* invertebrates either directly or through habitat modifications. Special status species are defined as listed plant and animal species that receive specific protection defined in federal or state legislation (Endangered Species Act), and are formally designated as endangered, threatened or rare under state or federal legislation. Also included in this definition are species that have no formal listing status as threatened or endangered, but are regarded as locally "rare," "sensitive," or "species of concern" on the basis of adopted policies and expertise of federal, state or local resource agencies, or local organizations with acknowledged expertise, such as the California Native Plant Society (CNPS). Species that meet the criteria of Section 15380 of the California Environmental Quality Act or the California Native Plant Protection Act are defined as special status species. In general, plants constituting CNPS List 1A, 1B or 2 meet the definitions of California Department Fish and Game Code Section 1901 (Native Plant Protection Act) and/or Sections 2062 and 2067 (California Endangered Species Act), and are protected as such. Following this definition, development of any of PDR sites could adversely affect burrowing owl, however, this impact is considered less than significant. Development at any of the project sites would not affect special status plant species.

Invertebrates

Several special status invertebrate species are known to occur southwest of the PDR sites near Los Angeles International Airport (LAX). No host-plants (i.e., *Eriogonum parvifolium*) to support El Segundo butterfly, a federally endangered species, were observed at the MDR or PDR project sites.

The MDR lots support the globose dune beetle, a federal species of concern, on a small degraded central dune scrub plant community (Arnold, 2003). Portions of these lots were seeded with an ornamental non-native wildflower mix and are watered during the dry season. The introduction of non-native species, increased vegetation cover (especially on the degraded central dune scrub habitat inhabited by the beetle), and ground saturation (out of the normal rainy season period) are factors that currently affect the beetle. Future development of this site could represent a potentially significant impact to the globose dune beetle.

At the time of preparation of this Initial Study, it is unknown whether or not this potentially significant impact can be mitigated or what mitigation measures may need to be applied. Since it may be impossible to avoid impacts on this species, mitigation could involve habitat restoration or in-lieu funds to an on-going habitat restoration program within the general vicinity. This potential impact and appropriate mitigation measures will be considered further in the EIR along with consultation of regulatory agencies.

The PDR Samarkand site (Cluster 9) supports an abundance of eucalyptus trees, which potentially support the overwintering monarch butterfly, a California Department of Fish and Game special animal. "Special Animals" is a general term that refers to the California Department of Fish and Game's California Natural Diversity Data Base (CNDDB) tracks, regardless of their legal or protection status. The term does not offer further protection beyond the legal or protection status that may apply. A focused survey for monarch butterfly will be conducted in the fall. Any potentially significant impacts from future project related development on the monarch butterfly will be analyzed further in the EIR. If additional surveys indicate that the impacts are significant, consultation with local regulatory agencies will be implemented and appropriate mitigation measures developed.

Burrowing owl

Construction activities and associated noise levels due to project development at any of the PDR sites could adversely affect burrowing owls by displacing them from the sites and adjacent areas. This impact is considered less-than-significant because (1) adjacent areas near the cliffs and nearby areas of the Ballona wetlands could provide habitat for these owls, (2) the burrowing owl is not a listed endangered or threatened species, and (3) if any owls are disturbed, the number would be extremely small due to the already disturbed nature of the sites. This impact will not be considered further in the EIR.

Special status plants

No suitable habitat is present for any special status plant species due to the disturbed nature of all the project sites, including urban landscaping and grading for well installation and abandonment, and presence of invasive plant species at the PDR and MDR project sites. There are no wetlands present to support Ventura marsh milk-vetch, southern tarplant, Coulter's goldfields or Ballona cinquefoil. Although special status plant species that occupy coastal dune habitats have historically occurred within the project vicinity, these species (including San Fernando Valley spineflower, beach spectaclepod, Orcutt's pincushion, and Brand's phacelia) have low potential occurrence at the project sites. Because of the lack of suitable habitat and disturbed nature of all the project sites there is no need to consider special status plants in the EIR.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

If all project sites were developed, the development would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No riparian or other sensitive communities are present at the project sites and thus future development is unlikely to affect these communities. Southern coastal salt marsh and southern dune scrub, which are defined as sensitive communities by California Department of Fish and Game, are known to occur within the vicinity of the project sites. Southern dune scrub is found at the El Segundo Dunes just west of the runways at LAX, approximately two miles from the project area. Southern coastal salt marsh is found at the Ballona wetlands approximately

one-half mile north of the project area. A Bird Conservation area is approximately one mile northwest of the MDR project site. However, it is reported that this area does not support an important linkage for avian distribution (Los Angeles County, 1995). The project sites do not support sensitive communities. Thus, the proposed project would not impact these sensitive communities.

The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No significant impacts to vegetation communities are expected as a result of the proposed project. None of the lots support dominant native vegetation. All lots support-introduced species such as iceplant, English ivy, and grass.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

If all project sites were developed, the development would not have a substantial adverse effect on federally protected wetlands. There are no wetlands or jurisdictional waters present on or directly adjacent to the project lots.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

If all project lots were developed, the development would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. No wildlife movement corridors are present on any of the sites and no long-term significant impacts are expected to local and/or regional wildlife movement corridors as a result of the proposed project. The proposed project would not adversely affect the ecological connectivity of the El Segundo dune ecosystem and the Ballona wetlands. None of the sites provide wildlife movement corridors to either El Segundo Dunes or the Ballona wetlands. No jurisdictional waters are present on the sites and no impacts to jurisdictional waters are expected from the proposed project.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

If all project lots were developed, the development would not conflict with any local policies or ordinances protecting biological resources. The site on Saran Drive (Cluster 5) supports a large canyon live oak (*Quercus chrysolepis*). Since none of the lots proposed for developing are larger than one acre, a permit is not required for removal of the oak tree (City of Los Angeles, 1990). The PDR project sites are not located within the unincorporated area of Los Angeles County, thus the County Tree Ordinance (No. 11/29/99REV, amend Title 22) does not apply. Furthermore, the MDR sites, while located

within Los Angles County, contain no trees. Therefore, the reasonably foreseeable development and removal of trees would not conflict with local ordinances and no impacts would result from the proposed project.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

If all project sites were developed, the development would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The sites are not contained within any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved Habitat Plan Area, thus no impact would result to such plans.

V. CULTURAL RESOURCES

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
V.	**CULTURAL RESOURCES— Would the project:**				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

SUMMARY

The initial review suggests that there is no potentially significant cultural resources impact that could not be mitigated by standard mitigation measures. These impacts and the appropriate mitigation measures will be considered in the EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix D for a discussion of the cultural resources in the project area.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Development of the MDR and PDR lots would not have a substantial adverse effect on the significance of a historical resource. Although historic resources are located within a one-mile radius of the proposed project, no historic resources are located on the properties. There are no California Historical Landmarks or California Points of Historical Interest listed within a one-mile radius of the overall project area. The project would not impact a historical resource as defined in §15064.5.

b) Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

Development of the PDR lots would require mitigation so as to not have a substantial adverse change in the significance of an archaeological resource or disturb any human remains. Twenty-eight archaeological sites have been recorded within a one-mile radius of the project area. Of these, 23 are prehistoric archaeological sites and five are historic archaeological sites. Five of the prehistoric sites are located within the boundaries of Playa del Rey, between Gulana Avenue on the west and Hastings Avenue on the east. None of the five archaeological sites occur within known boundaries of the PDR parcels included in this project. Because none of the five documented archaeological sites occur within the PDR parcels, the proposed project would not pose an adverse impact on known cultural resources. There is, however, a high overall density of prehistoric sites recorded along the bluff south of Ballona Creek between the beach and Interstate 405 (approximately 20). Many of these sites were discovered prior to the California Environmental Quality Act (CEQA) and did not result from systematic pedestrian survey. This means that a relatively high potential for undocumented buried prehistoric cultural material still exists along the bluff. This potentially significant impact would be considered less than significant once appropriate mitigations are developed implemented in the EIR.

Development of the MDR lots would not cause a substantial adverse change in the significance of an archaeological resource or disturb any human remains. No archaeological sites have been recorded within the Marina del Rey / Venice portion of the project area. Prehistoric archaeological sites are not expected within the former Ballona Lagoon and wetlands, which were dredged and filled in 1965 to form the marina.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Development of the PDR lots would require mitigation so as to not destroy any unique paleontological resource or site or unique geologic feature. The Natural History Museum of Los Angeles County Vertebrate Paleontology indicates that no fossils have ever been reported as occurring in dune sand within the United States Geological Survey (USGS) Venice 7.5 Quad. The lack of previously recorded fossil sites suggests a low potential for fossils within the project area in areas underlain by dune sand. However, as described in Appendix D, several previously recorded fossil sites occur in the Palos Verdes Sand. These occurrences indicate a high potential for fossil remains in the northern portion of the project area, which is underlain by Palos Verdes Sand. This potentially significant impact would be considered less than significant once appropriate mitigations are developed implemented in the EIR.

Development of the MDR lots would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Little or no potential for fossil remains is indicated by the geological character of the Marina del Rey / Venice portion of the project area, which is comprised of dune sand and fill materials dredged from Ballona Lagoon during construction of the marina.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

See comments on item b) above.

VI. ENERGY

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
VI.	**ENERGY—Would the project:**				
a)	Result in a substantial increase in overall or per capita energy consumption?	☐	☐	☒	☐
b)	Increase reliance on natural gas and oil?	☐	☐	☒	☐
c)	Result in wasteful or unnecessary consumption of energy?	☐	☐	☒	☐
d)	Require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity?	☐	☐	☒	☐
e)	Comply with adopted energy efficiency standards?	☐	☐	☒	☐

SUMMARY

It is not anticipated that the sale or development of the PDR and MDR lots would result in a substantial increase in consumption of energy resources. As a result, the EIR will not consider energy impacts in further detail.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project result in a substantial increase in overall or per capita energy consumption?

Development of the PDR and MDR lots would result in a maximum addition of 80 units. Development would consist of approximately 30 single-family units, 5 multi-family units, and one commercial building. Energy consumption can be reduced with implementation of standard energy conservation measures such as installation of ENERGY STAR®–labeled programmable thermostats with locking covers to prevent tampering with temperature settings; usage of ENERGY STAR® compact fluorescent lighting instead of incandescent lighting; installation of occupancy sensors to turn off lights when rooms are not in use; and installation of ENERGY STAR®-labeled roofing material. The average energy consumption level for the 80 units was not estimated, but is considered incremental as compared to the overall energy use of the Los Angeles area. In addition, any increase in energy demand resulting from the project has been accounted for in the City of Los Angeles and the County of Los Angeles General Plans. It is not anticipated that energy use would be substantially increased from the development of the lots. This impact would be less than significant.

b) Would the project increase reliance on natural gas and oil?

Development of the PDR and MDR lots would include primarily residential uses. The potential use of natural gas can be reduced with implementation of standard natural gas conservation measures such as installation of efficient gas furnaces (i.e., Bryan, Carrier, and Lennox energy efficient models); installation of energy-efficient refrigerators, freezers, water heaters, dishwashers, clothes washers, room air conditioners, heat pumps, furnaces, and boilers; and proper insulation. Even though the developers will determine specific appliances, efficiency measures are commonly implemented. The average increase of natural gas and oil use was not estimated, but is considered minor as compared to the overall use of the Los Angeles area. The required use is considered to be within resource availability and the impact would be less than significant.

c) Would the project result in wasteful or unnecessary consumption of energy?

Energy conservation measures will be the responsibility of the developers, owners and occupants of the MDR and PDR lots, there are programs set up to provide voluntary

incentives to avoid the unnecessary consumption of energy. One example of a program is the Green Power program, a component of the Green LA program, administered by Los Angeles Department of Water and Power (LADWP). Green power is electricity produced in an environmentally friendly manner, such as the sun, wind, and water, which are pollution free and natural. The Green Power for a Green LA program offers its customers voluntary access to green power. LADWP's residential Green Power program enables its customers to choose 100% renewable energy with 20% coming from new sources. Development is within expected growth levels and there is no reason to expect that the project will result in wasteful or unnecessary consumption of energy. This impact would be less than significant.

d) Would the project require or result in the construction of new sources of energy supplies or additional energy infrastructure capacity?

Development of the PDR and MDR lots would likely result in the construction of approximately 80 housing units. Because the lots are located in established residential communities, existing infrastructure would be available to the serve new development. Any modifications or improvements to existing energy infrastructure required to accommodate the project would be determined in consultation with the LADWP and SCG and would be subject to current installation charges. This impact would be less than significant. According to the Department of Water and Power, electricity is currently available to the surrounding residential properties, and the infrastructure for delivering electric power to the SCG lots is already in place. Existing electrical service capacity would be sufficient to accommodate development of the properties proposed for sale.

e) Would the project comply with adopted energy efficiency standards?

Efficiency measures outlined in California's 1998 Title 24 Building Energy Efficiency Standards could be implemented. Energy conservation measures will be the responsibility of the developers, owners and occupants of the MDR and PDR lots. There is no reason to expect that the project would not comply with adopted energy efficiency standards. This impact would be less than significant.

VII. GEOLOGY AND SOILS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
VII. GEOLOGY AND SOILS—Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☒	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Would underlying geology produce preferential pathways for trapped subsurface gases to migrate to the surface resulting in adverse conditions and substantial risk to future residents and customers of commercial establishments?	☒	☐	☐	☐

SUMMARY

The proposed project presents potentially significant geology-related impacts, some of which can be mitigated while others need additional study. Of significance are the effects on ground shaking to future residents and how the potential ground shaking would impact the integrity of the deep gas reservoir. Additionally, the underlying geology and its ability to promote upward vertical migration of gases from beneath the site is uncertain and may be considered a significant impact. An EIR will be prepared to consider these impacts in further detail.

IMPACTS ANALYSIS

Please see Appendix E for additional information of the geology and soils conditions in the PDR.

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

This impact analysis considers impacts related to the geologic and seismic hazards that could be affected by or affect the reasonably foreseeable future development of the 36 lots and PDRGSF area. Development of the site would attract more people to the project area thereby exposing more people to hazards related to seismicity and unstable soil and slope conditions. The proposed development can affect geology by reducing natural slope stability through construction grading or could lead to additional erosion and soil loss due to construction activities.

a.i) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The closest active fault, the Newport-Inglewood fault, is located about six miles east of the proposed project site. No portion of the proposed project site is within an Earthquake Fault Hazard Zone delineated by the Alquist-Priolo Earthquake Fault Zoning Act. This means that the occurrences of fault rupture would be considerably less at the project site than areas adjacent to fault rupture zones (See Appendix E, *Geology and Soils Background Information*). As discussed in Appendix E, the low angle Elysian Park Thrust fault lies at least 8,000 to 10,000 feet beneath the storage zone and 14 miles from the project site. Geologist refers to this type of fault as a “blind thrust” because displacement on such a fault does not generate a surface expression of fault displacement known as surface fault rupture. However, there is a component inherent in thrust faulting that could trigger faulting on other potentially active, or active, faults in the immediate region.

The project site is located in a seismically active region of California and large earthquakes could occur during the life of the project. Development of the lots and subsequent long-term occupancy could expose an increased number of people and structures to the risks of injury and property loss caused by earthquakes. However, considering the proposed project location away from an active fault trace capable of surface displacement, the risk of damage or injury directly related to surface fault rupture is low and the impact is less than significant.

a.ii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The numerous active earthquake faults within 50 miles of the project area will continue to subject the southwestern Los Angeles Basin and the project area to strong seismic shaking during large earthquakes. Earthquakes are unavoidable and will occur throughout the useful life of the project. Earthquakes in the region could generate long duration ground shaking capable of causing injury and severe structural damage. The potential for activity on a blind thrust is possible and if it were to occur, the ground motion could be higher than

some buildings could tolerate. Earthquakes that generate strong ground shaking could trigger movement on other nearby fault zones.

The impact of the seismic motion to the former oil reservoir and PDRGSF area is uncertain considering that sudden changes in the underlying geology, such as bedrock fractures, could develop preferential gas migration to the surface, especially through unabandoned, abandoned, or unknown well casings. Historical information indicates that earthquakes can damage gas wells. Strong ground shaking can also damage exiting and abandoned oil and gas wells causing a conduit to open for gas to escape to the surface.

Future development of the 36 lots would require earthwork and geotechnical studies to assure adequate protection against seismic shaking. All construction would incorporate the 1997 Uniform Building Code that requires that all structural designs account for site-specific earthquake ground motion. Given the uncertainty surrounding the potential adverse effects of a major earthquake on the geology underlying the project site and the potential for upward migration of gases, this would be a potentially significant impact that will be considered and analyzed further in the EIR.

a.iii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Young dune sand and lagoon sediments underlie the MDR area over a shallow, tidally influenced groundwater table. This area is located in an area delineated by the State of California as a Seismic Hazard Zone for liquefaction. Liquefaction hazard at the PDR sites is low due to the location and underlying geology. The materials in this area, namely saturated sands and coarse grain lagoon sediments could fail and liquefy during a major earthquake. Areas within a designated Seismic Hazard Zone must undergo prescribed evaluation and mitigation prior to development. Given that a potential liquefaction hazard could directly impact the MDR development and that under most cases, liquefaction hazards can be mitigated, this would be considered less than significant once appropriate mitigation is implemented. This impact will be considered and analyzed further in the EIR.

a.iv) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Slope failure can occur when construction grading, such as hillside cuts, alter natural slopes and reduce their stability. There are no significant slope stability concerns areas associated with the sale of the lots, however, slope stability may be an issue for some sites if they are eventually developed. Lots in Clusters 10, 11 and 12 contain slopes and could be susceptible to slope instability. The remaining lots are on relatively level ground. New construction will require geotechnical surveys that will recommend measures to prevent slope failure that could occur with or without a severe seismic shaking event. This is required for adjacent residential developments. Proper geotechnical investigations and analysis using standard geotechnical and geologic techniques specified in the Uniform

Building Code would reduce the potential for slope failures and ensure impacts are less than significant. Code-required measures are not considered mitigation.

b) Would the project result in substantial soil erosion or the loss of topsoil?

The shallow (within a few feet of the ground surface) soil, alluvium, and bedrock formations underlying the project will have varying susceptibility to soil erosion due to their unconsolidated nature and/or level of compaction. Running water and steep slopes are the primary components that trigger erosion of unprotected soil surfaces. The development of the properties in the southern portion of the project area will result in minor erosion-related impacts because this area is relatively flat and level. In the northeastern hilly areas, there is a potential for severe erosion if construction is concentrated on unprotected surfaces (i.e. bare surface soil).

The City and County of Los Angeles require site grading and earthmoving projects to comply with the Department of Public requirements and the procedures outlined in the County Hydrology Manual to avoid erosion and loss of topsoil. These requirements and procedures include the development of Best Management Practices to reduce erosion and sedimentation. As discussed in Appendix G, *Hydrology and Water Quality Background Information*, the NPDES permitting program, as implemented by the State of California, addresses measures to reduce sedimentation and erosion in storm water discharges for construction activities. Examples of protection measures include diversion dikes, silt fences, sediment traps or sediment basins, and mulching. Compliance with local grading codes, the NPDES process, and required runoff controls for construction, such as Best Management Practices, will minimize soil erosion in susceptible areas to less than significant.

c) Would the project be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Liquefaction is discussed in (a.iii) above. Landslides are discussed in (a.iv), above. There is some limited potential for slope instability in natural slopes that could fail due to static or earthquake-induced forces. In other areas, development requiring new cut slopes, road building, grading of terraces could reduce the overall stability of natural slopes leading to slope failure. Slope failure is only a potential on lots within Clusters 10, 11, and 12. In addition, soil in the project area may be moderately to highly expansive and certain alluvial soils may be porous and subject to consolidation under building loads. Standard geotechnical design standards and practices, as contained in the 1997 Uniform Building Code, would compensate for adverse slope stability and soil conditions. Implementation of standard engineering practices and application of the 1997 UBC would reduce to less than significant impacts related to existing weak or collapsible soils or slope instability conditions caused by development. Ground subsidence that causes large areas of the ground surface to settle beyond what a building can tolerate is not anticipated under this

proposed project. These potential impacts would be less than significant with mitigation and will be evaluated further in the EIR.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

See c) above. There may be portions of the development area that could contain expansive soils. Adverse effects due to expansive soils, such as those that could damage a building foundation or road, can be overcome by adequate investigation and engineering design. For this reason, expansive soils would be less than significant assuming properly implemented mitigation. The EIR will evaluate this issue further.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

New development would be required to tie into the municipal sewer and therefore would not require septic systems. Therefore, there would be no impact.

f) Would underlying geology produce preferential pathways for trapped subsurface gases to migrate to the surface resulting in adverse conditions and substantial risk to future residents and customers of commercial establishments?

The information presented in Appendix F *(Geology and Soils Background Information*) and Appendix G (*Hazards and Hazardous Materials Background Information*) provides information and data regarding the possibility of subsurface gas leakage from several different sources.[5] Subsurface gas can reach the surface through man-made conduits such as existing wells or through natural pathways caused by the underlying geology.

Man-made structures that could potentially transmit subsurface gas include old, oil and gas wells that were abandoned prior to DOGGR regulations, undocumented gas monitoring wells, dry holes, water extraction and monitoring wells, and oil and gas wells recently abandoned under DOGGR permit regulations. Once penetrated, a poorly constructed or abandoned well can serve as a conduit for upward migration of natural gas. Such conduits can develop as old wells deteriorate (over the 70 years); even when proper construction and abandonment methods have been applied. One potential pathway for gas migration is through the materials (construction debris, telephone poles) that were used to abandon wells and dry holes during the development and operation of the Playa Del Rey Oilfield in the 1930s and 1940s. Gas can also migrate to the surface through concrete seals and

[5] The three types of gas that may exist within the geological and soil units underlying the project area are processed natural gas (or piped gas), biogenic (or swamp) gas, and thermogenic (field) gas. Biogenic gas is primarily methane with carbon dioxide and sulfide gases resulting from decomposition of organic material in former lagoon deposits or other sources. Thermogenic gas is generated at depth, when increased temperatures and pressures alter organic material. It includes a broad range of gas components (methane, propane, butane, ethane, etc.). In contrast, processed natural gas is primarily methane remaining from thermogenic gas after most of the heavier gas components are removed (usually less than 0.1% heavy thermogenic hydrocarbons).

around casings of existing gas wells due to inadequate or deteriorating concrete seals, casing corrosion, fluctuating gas pressures and high temperatures. Once a well is abandoned, the casing is blocked making it impossible to determine well integrity by intrusion. Air and soil gas sampling are reliable methods to determine the integrity of an abandoned well. DOGGR has established guidelines for well abandonment, which includes development restrictions for areas where test data shows abandoned wells may be leaking, i.e. methane is detected in air samples.

Natural subsurface geology can contribute to upward gas migration through faults, permeable alluvial deposits, fault planes, structural discontinuities (fractures and joints) and aquifers. Earthquakes from the various southern California faults in the project vicinity can damage well seals or casings at depths generating new preferential pathways that lead to gas leakage. Gas from shallow sources can also migrate through younger geologic sediments that have permeable horizons and zones. However, in general, geologic pathways are relatively compacted in the shallow and storage zones because fractures, faults, and spaces between individual grains are reduced due to the weight of the overburden rock materials. Previous geologic studies conducted by SCG, DOGGR, the U.S. Geological Survey (USGS), and the California Geological Survey (CGS) indicate that faults are present in the PDRGSF area. However, the information and reports do not present conclusive evidence that active faults (those that have been active in the last 11,000 years) capable of surface rupture pass through the project vicinity. The Compton “Blind Trust” fault passes beneath the site but at depths greater than 20,000 feet. Blind thrust faults, although not expected to cause surface rupture, could cause ground shaking capable of causing well damage. No faults are reported to cut through the Storage Zone. The Charnock fault is considered potentially active (documented activity in the past 1.6 million years) and crosses the northeastern edge of the PDRGSF. Other smaller faults and fracture systems are inferred in various units of the Storage Zone within the Playa del Rey Field.

SCG reported incidents and the ETI (2000) soil gas survey results suggest the possible presence of migration pathways from the gas storage reservoir to the ground surface. This indicates that migration pathways may also be present elsewhere in the area of influence of the PDRGSF. Those pathways of greatest immediate concern are man-made: abandoned wells, which provide conduits for rapid vertical migration of gas to the surface. Natural (geologic) pathways may also transmit gas, but more slowly with the possibility of creating more regional surface gas problems.

Potential adverse project impacts are associated with exposure of people and structures to accumulation of subsurface soil gas in residential areas as a result of the proposed development. Although this potential currently exists, proposed development may expose more people and property to soil gas leakage if it were to occur through man-made structures, existing geologic structure, or as a result of a seismic event. A field study is currently underway to collect additional data on the potential of subsurface gas leakage. This is a potentially significant impact and will be considered and analyzed further in the EIR

VIII. HAZARDS AND HAZARDOUS MATERIALS

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
VIII.	**HAZARDS AND HAZARDOUS MATERIALS—Would the project:**				
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?	☒	☐	☐	☐
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 it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SUMMARY

The proposed project could pose potentially significant hazard impacts. These include the potential for exposure to gas leaking from abandoned wells by new residents located on the divested properties and/or potential effects from accidental releases of hazardous substance when construction activities occur on the properties. Existing reports that describe monitoring programs for hazardous substances at the project sites do not provide sufficient information to determine if hazards presently exist. The measurement data are also not sufficient to determine if

sale of the lots would result in significant impacts, and if the hazards impacts from potential development on the project sites may be significant.

A comprehensive measurement program must be undertaken to better characterize the extent of contamination at or near the identified lots. That analysis and the assessment of human health impacts will be reported in an EIR.

HAZARDOUS MATERIALS/WASTES

As part of the existing environment, hazardous materials and wastes may be encountered at each of the abandoned and operating gas wells within the surrounding residential community. Hydrogen sulfide (H_2S) and other odorous substances, such as methyl mercaptan, benzene, as well as other aromatic hydrocarbons, are all byproducts of natural gas production. These toxins may be present at active or abandoned wells. The impacts that these substances have on properties to be divested are discussed in the impact analysis below. SCG follows standard operating procedures that are prescribed to regulate the storage, clean up, and disposal of hazardous materials and wastes at their sites. These procedures are contained in both the Hazardous Materials Business Plan and the Hazardous Waste Contingency Plan.

GAS MIGRATION

SCG has operated the PDRGSF since 1942, and the twelve wells associated with the proposed sale of the 36 lots have been abandoned according to abandonment regulations. Giroux and Associates conducted a limited gas migration study in July 2001, at two abandoned wells that were assumed to be representative of the two areas where wells are located, the LorMar site (Cluster 3) and the Troxel site (Cluster 12), where gas leakage was monitored around an abandoned well on each site. The LorMar well is on top of PDR Mesa, and the Troxel well is located in beach sand at MDR. Probes were inserted into the soil around each well to measure methane gas. However, there was no methane detected at the LorMar well, indicating that there is no leaking gas.

At the Troxel site, there were initially levels of methane measured at four of the probes that were located 5 feet and 10 feet from the well head. However, the levels decreased to below detection limits after about four days of monitoring. If there were underground gas migration, there would initially be a gradual rise in methane levels until steady-state conditions would be reached, and the level would then remain relatively constant. During steady-state, the loss through the soil and to the air would be replenished with new gas from a leaking well. Because the monitoring showed a sharp decline in methane levels with time, there is probably no leaking gas, but the initial measured level might have been the result of drilling into old spilled oil that dissipated with time. If the well were leaking, there would be replenishment of the gas with time.

Since there was no steady-state level of gas measured at either site, there was no indication of any gas migration at either monitoring site. Since the two tests may not sufficiently characterize all of the abandoned wells, further testing is being performed for consideration in the EIR, prior to sale of the lots.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix F for an extensive background analysis of hazardous materials.

Sale of the lots assumes that the properties are sold in their existing conditions and that potential hazards impacts would be the result of gas leaks and migration to new residents from the existing wells.

a) Would the project create a significant hazard to the routine transport, use, or disposal of hazardous materials?

The proposed project and expected future development will not involve the routine transport, use or disposal of hazardous materials and thus there is no project-related impact.

b) Would the project 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?

The types of hazards that can occur from upset or accident conditions relates to potential explosions or exposure to high levels of toxic air contaminants (TACs) in the gas. These compounds include aromatic hydrocarbons, such as benzene, that are present in the gas.

Risk of Explosion

The generation, transmission, and distribution of natural gas may pose a risk of explosion. Natural gas has a flammable property that needs to be strictly regulated in order to reduce the risk of explosion to the public and the environment. Explosion can occur as a result of leakage from existing and abandoned gas wells and gas lines, and/or from third party interaction with the wells, transmission lines, and distribution lines. Distribution lines extend out from the main facility to the surrounding community. These lines are located underneath the community roads and sidewalks. If new residences are built on the divested properties there may be gas leakage from abandoned wells into the buildings and leading to possible explosions. This would be a potentially significant impact. Further study on methane gas migration is being undertaken, and the results reported in an EIR to assess the significance of impacts and possible mitigation measures.

Details of a field sampling plan are described in the referenced report (Methane Specialists and Sullivan Consulting Group, 2003). This sampling program will determine potential migration of gas near abandoned wells at the divested properties and the potential for explosion conditions. The significance of the impacts will be reported in an EIR.

In addition, releases of gas from the abandoned wells may occur if construction activities on the sale lots accidentally puncture an abandoned well, leading to a possible explosion.

Further analysis should be done on the abandoned wells, and safety precautions should be established to ensure that accidents do not occur during construction activities.

Risk of Toxic Air Contaminates

There is a possible risk of contracting cancer or noncancer health effects by residents at the sale lots from exposure to Toxic Air Contaminants (TACs) released from abandoned wells and lines. These compounds include aromatic hydrocarbons, such as benzene, that are present in the gas. Limited monitoring for gas leaks at the facility, including at abandoned wells, under normal operations has shown no significant hazard to the public or the environment. The following is a brief discussion of these TACs:

Natural Gas is normally odorless. There is a potential for natural gas to leak from the gas storage facility through various conduits, such as leaking gas wells and transmission lines. In the past, SCG injected an odorant into the gas storage zone in order to detect any leaks. Currently, there is enough detectable odorant within the storage zone that SCG injects the odorant directly into the distribution lines. The odorant that SCG uses is composed of either 100% Thiophane (Tetrahydro-thiophene) or a 50/50 blend of Thiophane and Tertiary-butyl-Mercaptan. The odorant injected is also less than 1 part per million (ppm) of each compound within the storage zone gas.

Thiophane is a flammable yellow liquid that supplies a noxious odor. There have been several studies done on this compound. As a result of the studies performed, the following information has been identified.

Thiophane is <u>not</u> listed by the American Conference of Governmental Industrial Hygienists (ACGIH), International Agency for Research on Cancer (IARC), National Institute for Occupational Safety and Health (NIOSH), or Occupational Safety and Health Administration (OSHA) as a carcinogen. The compound does have an LC50 by inhalation within a mouse of 27 gm/m3/2H. An LC50 value is the concentration of a material in air that will kill 50% of the test subjects when administered as a single exposure. The value gives information regarding an idea of the relative toxicity of the material. Comparing the LC50 of the Thiophane to the amount injected in the odorant shows that the injected amount is too small to create a significant health effect to the public or the environment. Thiophane does not contain any hazardous air pollutants or ozone depletors under the Clean Air Act. Thiophane is not listed as a hazardous substance, a priority pollutant, or a toxic pollutant under the Clean Water Act. OSHA considers none of the chemicals in this substance highly hazardous. Thiophane can be found on the State of California No Significant Risk Level right to know list.

Tert-Butyl Mercaptan is a flammable, clear, colorless liquid, which supplies a skunk-like stench. There have been several studies done on this compound. As a result of the studies performed, the following information has been identified.

T-butyl Mercaptan is not listed by ACGIH, IARC, NIOSH, OSHA, or the National Toxicology Program (NTP) as a carcinogen. The compound does have an LC50 by inhalation within a mouse of 16500 ppm/4H[6] and within a rat of 22200 ppm/4H. The LC 50 numbers when compared to the 1 ppm injected into the storage gas show that the injected amount is too small to create a significant health effect to the public or the environment. The compound is not designated a hazardous air pollutant or ozone depletor under the Clean Air Act. T-butyl Mercaptan can be found on the State of California No Significant Risk Level right to know list.

Hydrogen sulfide (H_2S) is produced in nature primarily through the decomposition of organic material by anaerobic bacteria. H_2S develops within stagnant anaerobic areas such as swamps, and naturally as a constituent of natural gas or petroleum. H_2S is a colorless, flammable and toxic gas that has a noxious odor. At first contact the odor smells like rotten eggs, however the sense of smell is lost after 2-15 minutes of exposure making it difficult to detect dangerous concentrations. The OSHA ceiling for H_2S is 20 ppm and the ACGIH Short-Term Exposure Level is 15 ppm. The compound has an oral LD50 within a rat of 175 mg/kg. The LD50 test evaluates acute lethality from exposure to a substance or product. Similar to the LC50, the LD50 is the dose at which 50 percent of the test animals can be expected to die. Hydrogen Sulfide is not listed by OSHA, IARC, NTP, or ACGIH as a carcinogen.

Hydrogen sulfide can be released to the environment through two different conduits within the operating facility. H_2S can vent from the oil water separator during extraction of gas from the storage facility. It can also be released from the monitoring and liquid extraction wells. Any exposure level of H_2S released into the environment that exceeds safety standards set by OSHA or ACGIH would be a significant impact. Giroux & Associates has conducted air sampling to determine the presence (if any) of H_2S in the project area as a result of the facility operations. A detailed examination of the findings and impacts is discussed in Section III, *Air Quality*. Since these data are inconclusive, an additional monitoring program will be carried out to determine potential exposure levels of hydrogen sulfide (Methane Specialists and Sullivan Consulting, 2003). The program is geared to measure both methane and hydrogen sulfide leakage from the abandoned wells and from other locations impacted on the sale lots.

A common by-product of gas and oil production is **Benzene and other volatile organic compounds**. Benzene is one of the most toxic of the aromatic hydrocarbons and therefore will be the focus of this impact analysis. Benzene is a common chemical that the public is exposed to each day. It is located within gasoline and vented into the atmosphere in small quantities at the local gas station. It is contained within cigarettes and exposes the average smoker to an increased amount, as opposed to the average nonsmoker. It is also released from cars while they are warming up or sitting idle.

6 The value shown represents the combination of dose and duration. In this case it is 16500 parts per million over 4 hours (i.e., 4H).

Benzene is an A1-confirmed carcinogen in humans according to ACGIH, an occupational carcinogen according to NIOSH, a known carcinogen according to NTP, a select carcinogen according to OSHA, a group 1 carcinogen according to IARC, and a carcinogen according to the state of California. The inhaled LC50 is 9,980 ppm in mice and 10,000 ppm/7H in rats. Benzene is listed as a hazardous air pollutant under the Clean Air Act. Benzene is listed as a hazardous substance, a priority pollutant, and a toxic pollutant under the Clean Water Act.

The OSHA Permissible Exposure Limit (PEL) for benzene is 1 ppm and the ACGIH Short-Term Exposure Level for benzene is 5 ppm. Because benzene can still be harmful at this level, ACGIH has recommended a threshold limit of 0.5 ppm and NIOSH has set a recommended exposure limit at 0.1 ppm.

Benzene could be released as a result of leaking abandoned well.

Discussion of Risks

As no Health Risk Assessment (HRA) was available specific to the proposed project, an examination was made of an HRA prepared for the nearby Playa Vista Project, which is located near the PDR sites (Kleinfelder, 2001). The Kleinfelder HRA relied on over 1,000 soil gas samples that were analyzed for methane and the toxic vapors: benzene, ethyl benzene, and xylenes (BTEX) and for hydrogen sulfide. The HRA reported that maximum methane concentrations were very high and were well above explosive limits. However, the HRA did not evaluate the potential for explosions. It did evaluate the health risks from potential exposure to TACs, BTEX and hydrogen sulfide.

The Kleinfelder HRA estimated maximum impacts by incorporating the measured soil gas concentrations of TACs into a model that simulates the transport of toxic gases to indoor spaces located near the source of contamination (Johnson Ettinger model). The model showed that the maximum cancer risk from exposure to soil gas was estimated to be 7×10^{-9} for average soil gas concentrations and 1×10^{-7} for maximum soil gas concentrations. These cancer risks are well below the 1×10^{-6} cancer risk considered to be acceptable by regulatory agencies and which do not require remediation. This HRA implies that the health risks to future residences on all of the sold properties would be less than significant. However, the HRA was based on a limited set of measurements, and there may not be sufficient measurement data to adequately characterize the spatial and temporal distribution of toxic gases at the property sites. In addition, further investigation is being conducted to determine if methane levels could reach explosive levels at some of the divested properties, as was indicated in the HRA. When new field data has been collected and analyzed, an HRA will be prepared for the proposed project and considered in the EIR.

To better quantify ambient air levels of TACs throughout the parcel locations, a meteorological monitoring and continuous ambient air monitoring program for methane and total hydrocarbons was conducted for one year (September 2000 to September 2001) at two locations (URS, 2002). The mean concentration of the monitoring results for methane

was very low (about 3 ppm), indicating that ambient levels are at about background levels for the Los Angeles region. The peak short-term level was 14 ppm, which is below health levels, and well below safety levels. However, because the measurements only covered two locations and may not have been located where maximum impacts from potential leaks might be occurring there is not sufficient information to eliminate a possible significant hazard to the public or the environment.

There is insufficient data in these studies (Kleinfelder HRA and URS air monitoring data) to conclude that there would be no significant health risks to residents located on the properties after sale of these properties, and additional monitoring and analysis is being conducted to determine if there may be significant impacts. The additional monitoring is designed to further characterize shallow subsurface soil vapor and soil quality below the 36 lots, all of which are located at or near the 12 abandoned oil and gas wells. Details of a monitoring program are described in a report by Brown and Caldwell (Brown and Caldwell, 2003). The data obtained from the monitoring program will then be incorporated in a follow-up exposure HRA and the significance of the impacts and potential mitigation measures will be reported in the EIR. Until this analysis is complete, this impact is considered potentially significant.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Any natural gas leaking from the abandoned wells could release TACs to the environment as described in impact b) above. These releases could be the result of possible accidents that might occur during construction on the properties or potential well leaks over time. The releases could migrate along air currents to nearby schools. All of the PDR lots are located less than 0.25 miles away from at least one of the three local schools:

- Westchester High School
- Paseo del Rey Elementary School
- St. Bernard High School

Note that Cluster 12 located in the MDR area is not located within 0.25 miles of any school. Additional analysis is needed to determine the potential for exposure of TACs at nearby schools, and how the project would cause those releases. The methods for the analysis are described above under impacts a) and b). This is a potentially significant impact and will be considered further the EIR.

d) Would the project 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 it create a significant hazard to the public or the environment?

Neither the PDR nor MDR sale lots are not contained on the list of hazardous materials sites (Cortese) that are subject to Government Code Section 659062.5, and, as a result,

would not create a significant hazard to the public or environment. Thus, there is no impact from the proposed project on this criteria and it will not be considered further in the EIR.

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?

The MDR lots are not located within two miles of a public airport and would not pose a safety hazard. Several of the PDR lots are within 0.75 miles of the northern most runway of Los Angeles International Airport. However, the nature of the project and the expected future development of the PDR sale lots would not pose a safety hazard. This impact will not be considered further in the 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?

The lots are not within two miles of an existing public or private airstrip and therefore will not create an impact that would require mitigation. This impact will not be considered further in the EIR.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The sale and future development of the lots may eliminate these locations from the SCG Emergency Response Plan that covers their remaining facilities. In that case, a new emergency response plan that addresses these locations would have to be developed. Additional analyses are needed in an EIR to determine if the project will interfere with adopted emergency response plans or as a mitigation measure, a new emergency response plan would be required to be prepared.

h) Would the project 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?

The project is not located in an area subject to wildfires. The impact would not be significant, will not require mitigation and will not be considered further in the EIR.

IX. HYDROLOGY AND WATER QUALITY

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
IX.	**HYDROLOGY AND WATER QUALITY— Would the project:**				
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☒	☐	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j)	Inundation of seiche, tsunami, or mudflow?	☐	☐	☒	☐

SUMMARY

No potentially significant impacts to hydrology or water quality would result from the sale or development of the properties. If each lot is developed independently, construction activities not

subject to best management practices[7] as designed in a Storm Water Pollution Prevention Plan (SWPPP) could result in temporary, cumulatively water quality impacts to the local receiving water, Ballona Wetlands. No significant long-term impact to water quality is anticipated from the increased development. This impact will be considered in greater detail in an EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix G for background information on Hydrology and Water Quality.

a) Would the project violate any water quality standards or waste discharge requirements?

Development of the lots would not violate water quality standards or waste discharge requirements. Each lot is covered under the Municipal Separate Storm Sewer (MS4s) National Pollutant Discharge Elimination System (NPDES) permit held by the County of Los Angeles, the purpose of which is to reduce the discharge of pollutants from MS4s to the maximum extent practicable. In addition, development of the lots could be subject to Phase II NPDES storm water regulations for construction activities, which apply when there is soil disturbance of one to five acres, or if less than one acre, is part of a larger common plan of development one acre or greater. Since the lots are each less than one acre, they would not be subject to the statewide General Construction Storm Water NPDES permit requirements if they were developed separately. However, multiple lots developed at the same time such that the soil disturbance would add up to more than one acre would be required to obtain a Storm Water Pollution Prevention Plan (SWPPP) for coverage under the statewide construction storm water permit. Complying with state requirements to obtain coverage under the statewide storm water permit would ensure that no impact to water quality standards or applicable waste discharge requirements would occur.

Since the PDR lots drain indirectly to Ballona Wetlands, development on each individual property may be subject to the Los Angeles Regional Water Quality Control Board (LARWQCB) Standard Urban Storm Water Mitigation Plan (SUSWMP) requirements due to the designated sensitive ecological status of the wetlands. However, finalization of the threshold requiring SUSWMP compliance has not been finalized yet. Implementation of a SUSWMP for each site would ensure that storm water runoff rates from each site would not be increased by development, and that urban runoff pollution would be minimized. This would require providing detention basins and potentially treatment systems to capture, reduce flow velocity, and treat the first ¾ inch of each storm according the LARWQCB requirements. Compliance with the SUSWMP requirements, if applicable, would ensure that storm water runoff would not violate water quality standards or applicable waste discharge requirements.

7 See http://www.swrcb.ca.gov/

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Development of residences on each lot could slightly reduce percolation of storm water into the groundwater basin. However, the PDR lots likely do not contribute a significant source of percolation due to their location on the bluff, which rises approximately 150 feet above surrounding areas. Water that infiltrates through the pervious surfaces on the lots would not likely contribute to significant recharge of the regional aquifer, which is more than 150 feet below the bluff. Therefore, the infill development of these individual lots would not significantly interfere with groundwater recharge or affect groundwater supplies.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site?

Development of the lots could modify drainage patterns on each lot. However, no streams or rivers exist on the sites, so none would be altered. Development would not substantially increase future erosion potential, assuming that most residences would be landscaped post-development to avoid exposed soils that would be subject to erosion. The project would not result in substantial erosion or alter the course of a stream or river.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

The PDR and MDR lots are each within already established residential neighborhoods. Development of the lots would not alter a stream or river. The infill development would add a small amount of additional impervious surface to an already urbanized residential area. However, the total amount of storm water runoff in the street gutter drainage system would not substantially increase. Furthermore, the infill development would occur on existing lots that have a street drainage system adequate to accommodate the 50-year storm pursuant to the City Department of Public Works design standard for the residential neighborhood. Development would not significantly increase flood risk.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Development on the PDR and MDR lots could increase impervious surfaces (driveways, sidewalks, etc) on each lot. This could slightly increase storm water runoff. The infill development would occur in neighborhoods that have a street drainage system designed to

accommodate the 50-year storm pursuant to the City or County Department of Public Works design standard. Prior to obtaining a building permit, developers would be required to prepare a drainage plan for each site attached with the building permit application. The City or County would approve each site's drainage plan prior to construction. No impact to the existing storm water drainage system would occur. Furthermore, development of the sites with residential uses would not be a source of substantial additional amounts of polluted runoff.

f) Would the project otherwise substantially degrade water quality?

Construction on the lots could produce pollutants that would have the potential to temporarily degrade the quality of receiving waters if not properly managed. The primary pollution of concern is sediment that results from excessive erosion of disturbed soils. Other potential pollutants include metals, pesticides, nutrients and soil additives, construction chemicals and fuel, and miscellaneous waste. No significant long-term impact to water quality is anticipated from construction activities.

Development would be required to comply with all applicable regulations to protect water quality. Construction on the lots could be subject to Phase II NPDES storm water regulations for construction activities, which apply when there is soil disturbance of one to five acres, or if less than one acre, is part of a larger common plan of development one acre or greater. Each individual site is less than one acre. Therefore, depending on when each site is developed, construction may or may not be subject to this regulation. If the sites are developed simultaneously and soil disturbance is greater than one acre, the developer would be required to prepare a SWPPP to minimize pollutants in runoff from the site. If the sites were developed individually, the regulations would not require a SWPPP to be prepared. Pollutants in runoff would not be considered a potentially significant impact to water quality due to the small size of the projects individually.

Once constructed, the development of the lots in either neighborhood would not substantially degrade water quality. Although landscaping could increase pesticide and fertilizer usage on the sites, the infill development would not substantially alter the existing residential nature of the two neighborhoods or the quality or character of the runoff. The contribution to urban runoff from each lot would be minimal. The PDR lots could be subject to SUSWMP requirements since storm water runoff from the area drains into the Ballona Wetlands, listed as an environmentally sensitive area. However, the requirements for environmentally sensitive areas have yet to be finalized by the LARWQCB. If required to comply with the SUSWMP, the developer would be required to implement source control BMPs as mitigation measures to reduce potential pollutants and/or storm water treatment systems to remove pollutants to ensure that development would not degrade water quality. No significant long-term impact to water quality is anticipated from the increased development.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The PDR lots are not located within a designated flood plain. Development in these lots would not place housing in a flood plain. The MDR lots are directly on the beach within the 100-year flood plain. Development on these two parcels would be subject to City requirements regarding development within a flood plain. The floor of any habitable space would need to be at least one foot above the base flood elevation. Design and construction of the structures would be subject to City approval. As such, the City-approved infill development in the existing neighborhoods located in a flood plain would not be considered a significant impact.

h) Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

The PDR lots are not located within a designated flood plain. Development in these lots would not place housing in a flood plain. The MDR lots are directly on the beach within the 100-year flood plain. Development on these two parcels would alter the flood plain slightly, requiring a letter of flood plain revision to be submitted to the Federal Emergency Management Agency. The development would need to be designed to avoid modifying the flood plain in a way that would impact neighboring structures. Designs would require City approval to ensure that flood flows would not adversely affect neighboring structures. As such, the City-approved infill development in the existing neighborhoods located in a flood plain would not be considered a significant impact.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The PDR lots are not located within a designated inundation area as noted in the City of Los Angeles' General Plan Framework. The MDR lots are directly on the beach within the 100-year flood plain and potential inundation area. Development within inundation areas requires City approval. The risk of dam failure and inundation is minimal. The City-approved infill development in the existing neighborhoods is located in a potential inundation area that would not be considered to have a significant impact.

j) Would the project expose people or structures to a significant risk of loss, injury or death involving inundation of seiche, tsunami, or mudflow?

The PDR lots are not located within a tsunami or risk area. Some sites are located near steep inclines and cliff faces that could produce mudflows. The MDR lots are each located within the City-designated tsunami risk zone. Given the standard conditions set forth in the City of Los Angeles Flood Hazard Specific Plan providing development requirements, and the rare occurrence of such an event, the impact is considered less than significant.

X. LAND USE AND PLANNING

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
X.	**LAND USE AND PLANNING— Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

SUMMARY

No impacts to land use and planning would occur from the proposed project. This topic will not be considered further in the EIR.

IMPACTS ANALYSIS

Please see Appendix H for additional information on land use.

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project physically divide an established community?

The development of the lots would not likely involve a new major road or highway. Any development project would not physically divide an established community; rather it would join the community of PDR. Therefore, there would be no land use impact as a result of the development of the PDR and MDR lots.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potential exists for approximately 80 new dwelling units to be constructed on all the lots proposed for sale. It is assumed that development would be required to follow the City and County of Los Angeles General Plans guidelines, current zoning ordinance, and community plans and specific plans, and therefore, there would be no conflict with any land use plans or policies.

There are 30 PDR lots zoned low density residential. Three lots in PDR are zoned medium density residential use, which allows 24 to 40 dwelling units per gross acre. One lot in the PDR area is zoned for commercial use, but could accommodate a single or two family dwelling or apartment house within an enclosed building. The two medium density residential zoned lots located in MDR are zoned multi-family residential in an established area for apartments.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Currently no local or community conservation plans apply to the lots in either PDR or MDR, and development of the lots would not conflict with any habitat conservation plan or natural community conservation plan.

XI. MINERAL RESOURCES

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XI.	**MINERAL RESOURCES—Would the project:**				
a)	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?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUMMARY

The proposed project would have no impact on mineral resources, as SCG would retain the right to any subsurface mineral resources and already has access to those present. Therefore, impacts to mineral resources will not be considered further in the EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the 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?

See b) below for discussion.

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

The sale of the PRD and MDR lots would involve only the transfer of surface rights and would not carry with it any action to develop the lots. The primary mineral resource that could be affected by the sale would be the sub-surface mineral rights. Per the proposed sale agreement, SCG would retain these rights after the sale. Therefore, there would be no impact from the sale of the lots.

Development of the lots would only involve surface grading and digging to establish footings for buildings. No loss of mineral resources would result from this activity. As with the sale of the lots, development of the lots would not result in any significant impacts from loss of subsurface mineral resources or access to important mineral resources as there would be no loss of such resources from the development of the lots. Furthermore, SCG would retain future mineral rights after the development.

XII. NOISE

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XII.	**NOISE—Would the project result in:**				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
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 expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

SUMMARY

The proposed project presents a number of potentially significant noise impacts. These impacts will be analyzed and considered further in the EIR.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Please see Appendix I for an extensive background analysis of noise.

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Development of the 36 lots could lead to increased noise levels in the area that could affect existing land uses during construction and post-construction. Construction noise levels at and near locations on the project site would fluctuate depending on the particular type, number, and duration of use of various types of construction equipment. The effect of construction noise would depend upon how much noise would be generated by construction, the distance between construction activities and the nearest noise-sensitive uses, and the existing noise levels at those uses. One lot is zoned commercial and typical noise levels generated by construction of commercial buildings range from 84 dBA during ground clearing to 105 dBA during pile driving. These noise levels would be in excess of the City's noise ordinance standards discussed in Appendix I.

Monitored noise levels in the area range from 51 dBA in the "acceptable" category to 73 dBA in the "unacceptable" category for residential uses. Therefore the project could lead to a potentially significant impact by introducing additional noise sources (additional residences and increased traffic) in the local environment.

Hence, development of the residential lots and one commercial lot would constitute a potentially significant impact. Even so, mitigation measures to reduce these impacts could be implemented by the developers to comply with local noise ordinances, and result in a less than significant impact. The potential for noise in excess of the City's noise ordinance is short term during construction activities only. This impact will not occur during normal residential occupations. This impact will be considered and analyzed further in the EIR.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Sensitive receptors, primarily the adjacent residential dwellings, would experience minimal ground-borne vibration during construction. However, since the duration of this impact would be short-term and since construction activities would be subject to the requirements of the City's noise ordinance, this impact would be considered to be less than significant.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Upon construction, the permanent increase in ambient noise levels from developed lots would not be substantial, as the noise would be identical to existing levels for residential neighborhoods. The increase in vehicle traffic on the local roadway network would also be minimal given that the 36 lots are located in clusters dispersed over the PDR and MDR areas. With the exception of Cluster 5 (on which commercial uses could be located - possibly leading to more vehicle trips), development of the remaining 11 clusters would produce a very minimal increase in traffic on the local roadway network, as discussed in Section XVI, *Transportation/Traffic*.

A change in noise levels of less than three dBA is not discernible to the general population; an increase in average noise levels of three dBA is considered barely perceptible, while an increase of five dBA is considered readily perceptible to most people (Caltrans, 1998). Therefore, for evaluation of operational noise due to project-related traffic, a noise increment of 3 dBA is used as the significance threshold for this project. A doubling of traffic volumes (100 percent increase in traffic volume) would result in a 3 dBA increase in traffic noise. Since the increase in traffic would be minimal and well below a 100 percent increase, the associated impact would also be less than significant.

The patterns of usage of the local roadway system would not change either from construction or post-construction of the 36 parcels. The traffic volumes associated with these developments would be minimal (see Section XVI, *Transportation/Tra*ffic) as not to result in congestion or changes in behavior of the local patrons of the area, and would result in a less than significant increase in noise on the local street system.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As discussed under checklist item a), a temporary and intermittent increase in ambient noise would be experienced in the project area during actual construction on the lots. The adjacent residential dwellings are considered sensitive receptors to the lots, and most dwellings are approximately 15 to 20 feet from the property boundary. This impact to ambient noise levels in the project vicinity would be potentially significant. Therefore, this will be discussed in greater detail in the EIR.

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 expose people residing or working in the project area to excessive noise levels?

The project area is 0.75 miles northwest from the northernmost runway of Los Angeles International Airport. The southernmost areas of PDR along Manchester Avenue are very close to the 65 dB Community Noise Equivalent Level (CNEL) contour for the airport. The MDR lots are located 2 miles to the northwest of the northernmost runway at Los

Angeles International Airport. Development would expose people residing or working in the lots to noticeable noise levels. This would be a potentially significant impact that will be discussed in greater detail in the EIR.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project area is about three miles south of Santa Monica airport and does not experience excessive noise levels from overflights associated with this airport. Therefore, this impact would be less than significant.

XIII. POPULATION AND HOUSING

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XIII.	**POPULATION AND HOUSING— Would the project:**				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUMMARY

The proposed project would have a less than significant impact on growth induction and would have no impact on housing. Therefore, population and housing will not be considered further in the EIR.

POPULATION

The PDR and MDR lots are located within Los Angeles County. The estimated population of Los Angeles County for 2000 was 9,519,338 (United States Census Bureau, 2000). PDR is a community within the City of Los Angeles West Planning area with an estimated 2000 population of 464,000. The Census 2000 population count for the PDR community was 3,450

(United States Census Bureau, 2000). The estimated population for the community of MDR was 8,176 (United States Census Bureau, 2000).

According to the Regional Housing Needs Assessment (RHNA), population growth for the City of Los Angeles in the 1998-2005 period is forecast to be slower than was forecast for the 1989–1994 period. The forecast for the earlier period followed a period of very rapid growth in the 1980s, while the forecast for the 1998–2005 period follows a period of much slower growth. The forecast growth by subregion and Community Plan Area (CPA) from 1990-2010 is 6,160 people and 14,300 people for Venice and Westchester-Playa del Rey respectively (City of Los Angeles, 2000). The population capacity is 61,683 people for the Venice CPA, and 113,340 people for the Westchester-Playa del Rey CPA.

HOUSING

The existing housing stock in Los Angeles County as of 2000 was 3,272,169 with a vacancy rate of 5.5%. There are 3.1 persons per household in Los Angeles County, with 2.37 persons per household estimated in 1998 for the Westchester-Playa del Rey area (Chambers, 2000). According to the 2000 Census, MDR has a total of 6,321 housing units, a 0.7% homeowner vacancy rate, and an average household size of 1.54 persons (United States Census Bureau, 2000). The PDR census tract recorded a total of 1,574 housing units, a 1.3% homeowner vacancy rate, and an average household size of 2.26 persons (United States Census Bureau, 2000).

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The physical potential exists for 30 new single-family homes to be constructed on the lots zoned for low density residential (R1-1) at PDR. Three lots in PDR are zoned R3-1, medium density residential use, which allows 24 to 40 dwelling units per gross acre. One lot in the PDR area is zoned for commercial use (CR-1), but could accommodate a single or two family dwelling or apartment house within an enclosed building. The two medium density residential zoned lots located in MDR are zoned multi-family residential in an established area for apartments.

The total number of dwelling units that could potentially be created is projected as follows:

PDR – R1-1	30 single-family units
PDR – R3-1	30 units
PDR – CR-1	10 units
MDR – R3-1	10 units
TOTAL	**80 units**

Using average household size numbers from the 2000 census, the projected maximum population increase would be 159 for PDR and 16 for MDR. Therefore, a total of 175 persons for all development at maximum build-out for both communities would result from development of the lots.

According to RHNA, the total housing need for the City of Los Angeles for the 1998−2005 period is less than half that calculated for the 1989-1994 period.[8] The total construction need for 2000-2005 for the unincorporated areas of the Westside sub-region is 2,933 dwelling units (SCAG, 2000). The forecast growth by subregion and CPA from 1990−2010 is 2,790 and 5,875 for Venice and Westchester-Playa del Rey respectively (City of Los Angeles, 2000). The most conservative estimate of new dwelling units construction would add less than 1% of the forecasted growth to the Venice CPA and less than 1.5% to the Westchester-Playa CPA.

The forecasted growth as a result of the project is not substantial for the area, and will not result in new businesses or indirect impacts (such as extension of roads or other infrastructure). The impact is less than significant.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The characteristic of the project is development of new homes, respectively. The proposed development includes a total number of 80 dwelling units (see item a) above). This development is consistent with the City and County of Los Angeles General Plans land use designations, and will not result in displacement of existing housing development. There is no impact as a result of this project.

c) Would the project displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

Using average household size numbers from the 2000 census, the projected maximum population increase would be 159 for PDR and 16 for MDR. Therefore, a total of 175 persons for all development at maximum build-out for both communities would result from development of the lots. The total of 80 dwelling units and 175 new persons in MDR and PDR would not be considered an adverse impact for the area. The lots in PDR and MDR are located in an already developed area. Any development of the lots would constitute infill development. Any growth that would result from further development of the proposed lots has been accounted for in the City of Los Angeles and the County of Los Angeles General Plans. Therefore, the population and housing from development of the lots is anticipated to conform to applicable General Plan land use and zoning designations and standards. Development of the lots would not induce substantial population growth in the area, nor would it displace existing housing or populations

[8] 60,280 dwelling units for the 1998 – 2005 period and 129,000 dwelling units for the 1998-2005 period.

necessitating the construction of replacement housing elsewhere. There is no impact as a result of this project.

XIV. PUBLIC SERVICES

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XIV. PUBLIC SERVICES—Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☒	☐

SUMMARY

This review suggests that no significant impacts to public services would occur from the proposed project. Therefore, there will be no additional evaluation in the EIR. Parks and recreation are discussed in Section XV-Recreation.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for:

i) Fire protection. The Los Angeles City Fire Department offers fire prevention and suppression, as well as life safety protective services to the PDR area. As part of the

City's General Plan, the Fire Protection and Prevention Plan outlines policies with regard to the operation, upkeep, and development of fire protection services to city departments, government agencies, developers, and the public. If future owners of the surface rights develop the lots, all development would be required to be in accordance with local policy. The City of Los Angeles Fire Department and the City of Los Angeles Planning Department routinely review applications for development for compliance with all applicable codes, including the Fire Protection and Prevention Plan.

The nearest fire station to the PDR lots is Los Angeles City Fire Station Number 5, located at 6621 West Manchester Avenue. This station is located approximately 2 miles from the PDR community. Fire Station Number 5 has an emergency call response time of approximately 4 to 6 minutes (Elder, 2003). The nearest fire station to the MDR lots is County Fire Station Number 110, located approximately 2 miles from the MDR lots on Admiralty Way. County Fire Station Number 110 also has an average emergency call response time of approximately 4 to 6 minutes (Schafer, 2003).

A determination of impacts from the development of the lots would be made at the time individual applications for the development are processed with the City of Los Angeles. Even so, the development is not expected to have a significant impact on fire protection services in the project area.

ii) **Police protection.** The Los Angeles Police Department (LAPD) Pacific Community Division provides police protection services in the PDR project area. The MDR project area is serviced by the Los Angeles County Sheriff's Department (LASD) office in MDR.

The Pacific Community area is 24.1 square miles in size, has over 200,000 residents, and is under the jurisdiction of Operations West Bureau (LAPD, 2003). The Pacific Area Station is located at 12312 Culver Boulevard at Centinela Avenue, approximately two miles north of the PDR lots. The Sheriff's office in MDR is located on 13851 Fiji Way, approximately four miles driving distance from the MDR lots.

If the lots are developed in the future by the owner of the surface rights, all development would be in accordance with local policy and subject to review by the City and County of Los Angeles. A projected population increase of approximately 175 persons is expected from the project. This increase in population is not expected to significantly affect the adequacy of protection, response time, or other performance criteria currently provided by LAPD and LASD.

iii) **Schools.** Several schools are located within one mile of the proposed project area, including Westchester High School, Saint Bernards High School, Paseo del Rey Elementary School, Loyola Marymount University, and Loyola Village Elementary

School. Students from the project area also attend Wright Junior High School; however, it is located approximately 1.5 miles from the nearest lot proposed for sale by SCG. Saint Bernards High School is a private school. Public schools in the project area are within the Los Angeles Unified School District (LAUSD).

The capacity of public schools to accommodate increased student populations is determined based upon comparisons of the current and projected enrollment and the capacity of the school facility.

Any future development by the new owners would be in accordance with local policy and subject to review by the City and County of Los Angeles prior to accommodation by the Los Angeles Unified School District. The number of school-age children generated by the expected increase in area population LAUSD student generation rates will be projected in the EIR.

The capacity of public schools to accommodate increased student populations is determined based upon comparisons of the current and projected enrollments with the designed capacity of existing available school facilities. Since the lots are zoned for residential use and the surrounding area is highly developed, it is reasonable to assume that development of these parcels has been accounted for in population projections affecting current and future staffing and resource decisions in the school district.

Per the Leroy F. Green School Facilities Act (Senate Bill 50), the capacity of any public school cannot be considered the reason for denying a land use application. Impacts fees would be collected per Senate Bill 50 requirements at the time of building permits and would be used by the impacted schools. Payment of the impact fee would provide the legal mitigation measure for impacts to local school districts.

iv) **Parks.** The capacity of public parklands to accommodate population growth is determined by comparing current and projected acreages available or designated for public parks with the existing population of the surrounding metropolitan area. Targeted area goals for public parks have not been met for the City and County of Los Angeles. Please see Section XV, *Recreation*, for additional information.

v) **Other public facilities.** If future owners of the surface rights develop the lots, all development would be required to be in accordance with local policy and subject to review by the City and County of Los Angeles. Because of its infill nature, development of the 36 lots would not be likely to significantly impact the provision of other public facilities.

XV. RECREATION

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XV.	**RECREATION—**				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

SUMMARY

This review suggests that no potentially significant impact on recreation would occur from the proposed project. Therefore, no additional evaluation of recreation will be included in the EIR.

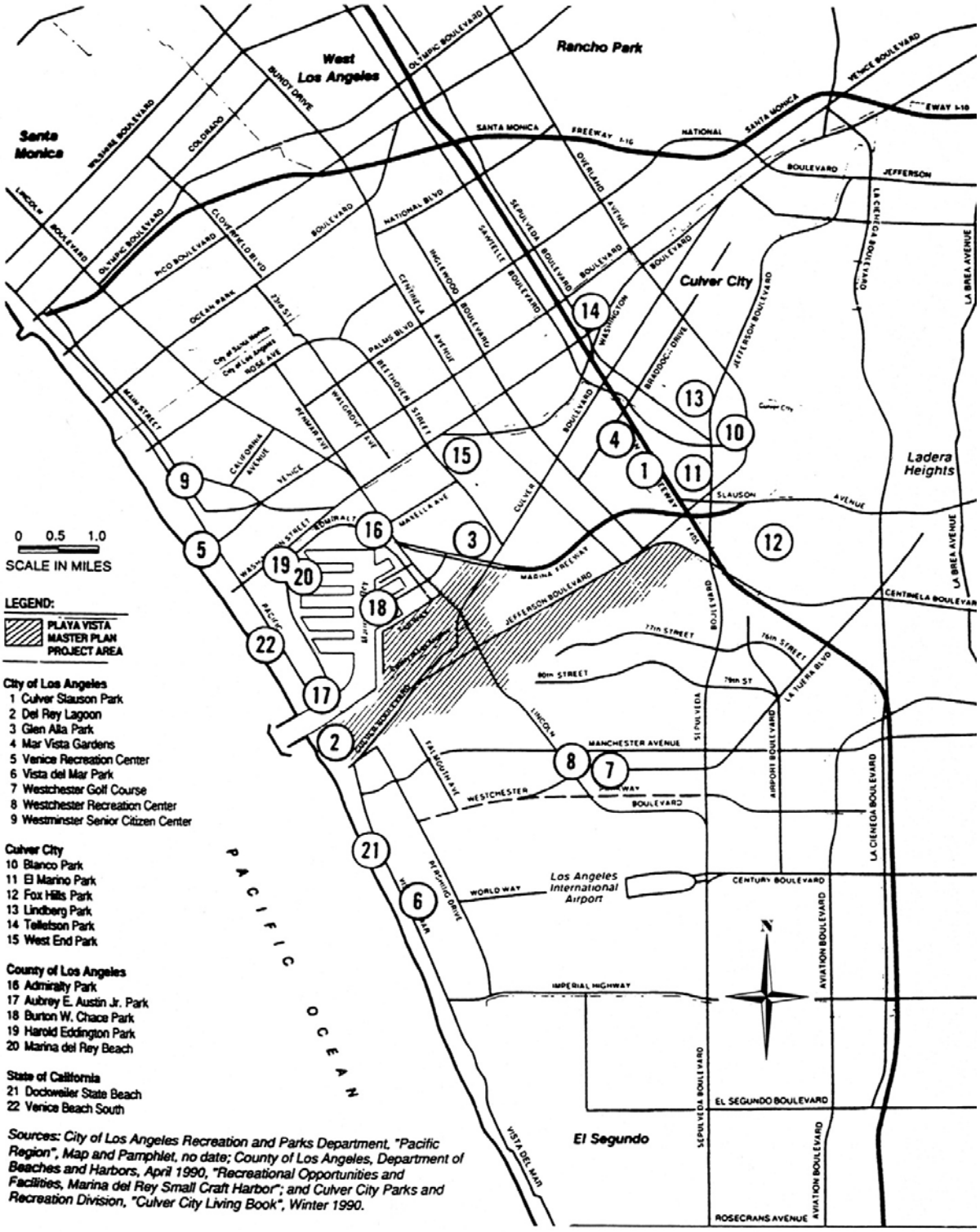
IMPACTS ANALYIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The City of Los Angeles is served by a wide variety of regional and local parks and recreation areas (Chambers, 2000). Residents also have access to state and county parks and recreational facilities. Provision of park and recreational space within the City of Los Angeles is estimated to be approximately 1.7 acres per 1,000 people. Los Angeles County provides approximately 1.6 acres of park and recreational space per 1,000 people. The Public Recreation Plan, a component of the Service Systems Element of the City of Los Angeles General Plan provides standards for the development of recreational facilities throughout the City. Long-range planning goals include the provision of four acres of parkland per 1,000 people. Short- and intermediate-range planning goals include the provision of a minimum of two acres of parkland per 1,000 people (Chambers, 2000).

There are nine city parks located within an approximately 2-mile radius of the project area (Chambers, 2000) (see Figure XV-1). Parks and Recreation facilities operated by the City of Los Angeles include the Del Rey Lagoon, Westchester Recreation Center, and Westchester Golf Course. The City's Department of Parks and Recreation maintains



SOURCE: Environmental Science Associates

Figure XV-1

City Parks in the Proximity of the Project Area

approximately 15,600 acres of parkland. Dockweiler State Beach, operated by the State Parks and Recreation Department, is located approximately one mile southwest of the proposed project, and the planned Kenneth Hahn State Recreation Area (KHSRA) is also near the proposed project. The MDR small craft harbor, operated by the Los Angeles County Department of Beaches and Harbors, provides a number of boating and water-related recreational opportunities.

None of the MDR or PDR lots have been historically used by the public for access to other property or for other public uses such as parks. The lots proposed for sale are undeveloped and many are currently landscaped and maintained by SCG. From time to time, individuals may have intentionally trespassed upon the property; however, SCG visits these properties regularly, and there is no evidence of open and notorious use over time that could result in the public believing the properties are available for public use. The lots are private property and any use by local residents is unauthorized.

If the owner of the surface rights develops the lots in the future, all development would be required to be in accordance with local policy and subject to review by the City and County of Los Angeles. Based on population and housing information (see Section XIII, *Population and Housing*), and assuming that single-family homes were developed on the available 30 single-family residential-zoned lots and multi-family homes were developed on 6 lots, a maximum population increase of approximately 175 persons would be expected. Because the City does not currently meet its standard for parkland (two acres per 1,000 residents), the addition of these residents would incrementally add to the existing parkland deficiency. Future developers would be required to either provide adequate parkland or pay an equivalent fee that would allow the City and County of Los Angeles to buy land for parks. Even so, the impacts to existing neighborhood and regional parks or other recreational facilities is less than significant as none of the properties are currently designated for recreational use and substantial physical deterioration of park or recreational facilities is not expected to occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

If the sites were developed, the development would have a less than significant impact on recreation and the environment. The City and County of Los Angeles would determine any impacts to the park system during their review of any proposed development on the sites. A determination of impacts from the development of the sites would be made at the time individual applications for development are processed with the City. These conditions imposed on the future developer would be required and would not be considered mitigation.

XVI. TRANSPORTATION / TRAFFIC

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XVI.	**TRANSPORTATION/TRAFFIC— Would the project:**				
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☒	☐
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e)	Result in inadequate emergency access?	☐	☐	☒	☐
f)	Result in inadequate parking capacity?	☐	☒	☐	☐
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

SUMMARY

The proposed project presents two potentially significant but mitigated traffic and transportation impacts. These impacts will be analyzed and considered in the EIR.

Regional freeways in the project vicinity include the Santa Monica (I-10), San Diego (I-405), Anderson (I-105), and Marina (State Route 90) Freeways. Interstate 10 provides an east-west link to downtown Los Angeles. Interstate 405 is the major north-south link in west Los Angeles. Interstate 105 connects with Imperial Highway on the south side of Los Angeles International Airport (LAX). State Route (SR) 90 provides an east-west link from I-405 to MDR.

Several arterials and local streets serve the PDR lots. The arterials include Manchester Avenue (SR 42), Lincoln Boulevard (SR 1), Culver and Jefferson Boulevards (to the north), and Pershing Drive. Manchester Avenue is an east-west road that provides the primary connection from the PDR project lots (on local residential streets) to the overall roadway network (eastward to Lincoln Boulevard and I-405, and westward to Pershing Drive). Lincoln Boulevard is a north-south roadway in the project area that connects with Sepulveda Boulevard at LAX to the south and

extends north into MDR, Venice, and Santa Monica. Culver and Jefferson Boulevards are oriented diagonally east-west roadways north of the PDR project lots and connect PDR and coastal areas farther west with Culver City and the I-405 Freeway. Pershing Drive is a north-south road that connects Manchester Avenue with Culver Boulevard to the north and Westchester Parkway to the south.

As described above, the clusters of lots within the PDR project area are served by a series of local roadways whose primary connection to the roadway network in Manchester Avenue. The local streets include Falmouth Avenue, Calabara Avenue, 79th through 83rd Streets, Saran Drive, and Gulana Avenue.

The MDR Peninsula/Venice area is served by a number of arterial and local streets. The arterials include Pacific Avenue, Washington Street/Boulevard (to the north), and Lincoln Boulevard (to the east). Pacific Avenue is a north-south street that extends from the Marina Peninsula to Venice and Santa Monica. Washington Street/Boulevard is an east-west street that begins at Pacific Avenue, and runs east to Culver City and beyond. Lincoln Boulevard (SR 1) is a north-south street in the project area that connects with Sepulveda Boulevard at LAX to the south and extends north into Santa Monica. The two lots in the Marina del Rey project area are located north of Union Jack Street, between Speedway Avenue and the Venice Beach on the MDR Peninsula.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

a) Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

Previous traffic studies conducted in the project area have evaluated traffic levels at major intersections. The most recent studies indicated that, with one exception, a.m. (morning) and p.m. (evening) peak-hour intersection service levels are generally level of service (LOS) D or better (volume/capacity ratio of 0.88 or lower). The exception is the intersection of Manchester Avenue / Lincoln Boulevard, which was found to operate at LOS E (volume/capacity ratio of 0.91) during the p.m. peak hour.

It is assumed that the lots with residential zoning controls would be developed as single-family or multi-family housing, as appropriate to those zoning controls. For these lots, the estimated traffic generation is 334 trips per day (ITE 1997). The future use on the one project lot (in the PDR area) that is zoned commercial has not been established. With the assumption that the commercial use would be a general office building (trip generation per 1,000 square feet gross area), estimated traffic generation is 31 trips per day (ITE 1997). The estimated total traffic generation from development of the PDR and MDR lots is 365 trips per day. Construction on the project lots would also generate increased traffic on area roadways.

However, those increases would be temporary and dispersed over the network of roadways serving the project area.

According to the Coastal Transportation Corridor Specific Plan, residential dwellings are exempt from its provisions. The Plan applies only to Commercial, Manufacturing, and Automobile Parking zones. Thus, 35 of the 36 lots located in PDR and MDR would be exempt due to their residential zoning and the nature of the presumed development (i.e., residential dwellings). Additionally, the total number of trips generated by PDR and MDR development is minimal and no significant impact is anticipated as a result of this project.

The unknown use of the commercially zoned lot in PDR, even with the potentially small number of trips that may be generated could still represent a significant impact. However, this would be considered less than significant once appropriate mitigation is implemented. This impact and potential mitigation will be considered further in the EIR.

b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Future owners of the surface rights would be required to develop the lots. All development would be in accordance with the local policy and subject to review by the City and County of Los Angeles. The 36 undeveloped lots will be sold to several different entities or individual owners, and are not likely to be developed all at once. However, for analysis purposes it is assumed that all of the lots would be developed at the same time, or at least within a short period of time.

The first major roadway that the local residential streets in the PDR project area meet is Manchester Avenue, and therefore it is the most likely road that area residents use to get in and out of the area. Manchester Avenue is designated as a Major Highway-Class II and has an average capacity of 36,000 vehicles per day. The City of Los Angeles assesses changes in roadway levels of service on the basis of the percent increase in traffic volumes, with different (increasingly lower) thresholds of percent increase depending on the prevailing (pre-project) level of service. For example, the impact threshold for roadways operating at LOS C is a project-generated four percent increase in roadway traffic volume; at LOS D is a two percent increase; and at LOS E is a one percent increase. Preliminary assessment of the trip generating potential associated with the project lots indicates a significant impact potentially could occur if the one commercially zoned lot was developed with a traffic-intensive use. However, this would be considered less than significant once appropriate mitigation is implemented. This impact and potential mitigation will be considered further in the EIR.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Development of the project lots would not change air traffic patterns, increase air traffic levels or result in a change in location that results in substantial safety risks. Although the project site is located in proximity of the Los Angeles International (LAX) Airport, the maximum heights of the buildings on the project lots are expected to be consistent with heights of other nearby buildings. The project effect would be considered less than significant.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project lots are located in established neighborhoods, and development of those lots would not introduce hazardous design features or incompatible uses. There would be no sharp curves, dangerous intersections, or incompatible traffic circulation uses introduced as a result of this project. The project effect would be considered less than significant.

e) Would the project result in inadequate emergency access?

The project lots are located in established neighborhoods, and development of those lots would not result in inadequate emergency access. There would be no blockage of access or traffic pattern disturbance that could adversely impact emergency access. The project effect would be considered less than significant.

f) Would the project result in inadequate parking capacity?

Currently, the residential development surrounding the MDR and PDR lots contain designated parking areas. If the residential lots proposed for development are developed in the same manner, parking demand associated with the new houses should not generate a increase in demand to the onsite parking supply. A significant impact potentially could occur if the one commercially-zoned lot were developed without sufficient onsite parking supply. Without knowing the intended development scenario of the commercial lot, a demand can not be estimated. The peak parking demand that would be generated by the commercial lots can be estimated in the EIR analysis if the intended use is known. An impact determination can be made at that time.

g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The project lots are located in established neighborhoods, and development of those lots would not conflict with adopted policies, plans, or programs supporting alternative transportation. There would be no bus stops, turnouts, substantial increase in public transportation, substantial increase in bicycle racks, etc. as a result of this project. The project effect would be considered less than significant.

XVII. UTILITIES AND SERVICE SYSTEMS

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
XVII.	**UTILITIES AND SERVICE SYSTEMS— Would the project:**				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

SUMMARY

Development of the proposed project would not be expected to impact utilities and service systems. However, impacts to utilities and service systems will be addressed in the EIR in order to verify that the lots would be sufficiently served by utility providers and facilities.

IMPACTS ANALYSIS

SALE AND DEVELOPMENT OF THE PLAYA DEL REY AND MARINA DEL REY LOTS

Development of all 36 lots in PDR and MDR is calculated to increase the local population by less than 1%. Development of the lots under consideration would be subject to all policies of the City and County of Los Angeles, and a determination of impacts would be made as individual applications are submitted. Due to the infill nature of development of these lots, and the existing availability of services to the area, adverse impacts to utilities would not be expected.

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Development of the lots is not expected to exceed wastewater treatment requirements of the local Regional Water Quality Control Board. However, potential impacts to wastewater treatment requirements will be further analyzed in the EIR.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water

The Los Angeles Department of Water and Power (LADWP) provides potable water for the City of Los Angeles, including the project area. Water service is currently available to the lots to be sold in PDR and MDR. According to the LADWP's Urban Water Management Plan (UWMP) 2001 – 2002 Annual Update, the LADWP supplied approximately 680,000 acre-feet (AF) of water to its customers during fiscal year 2002 (July 1, 2001 through June 30, 2002). LADWP currently receives its water supply from the Los Angeles Aqueducts (228,396 AF for fiscal year 2002), local groundwater (73,387 AF for fiscal year 2002), and from the Metropolitan Water District of Southern California (MWDSC) (372,357 AF for fiscal year 2002). These supplies were adequate to meet the City's water demand during fiscal year 2002.

In addition to water supply, the UWMP discusses water demand management. LADWP operates a water conservation program that results in a demand reduction of approximately 15%. In addition, recycled water is currently used in the City to meet irrigation, commercial, and industrial demands, where feasible. LADWP also submitted a proposal to MWDSC in June 2002 for construction of seawater desalination facility. LADWP has met the immediate water needs of its customers and is well-positioned to continue to do so in the future. However, LADWP will continue to rely upon its investments in MWDSC to meet future needs that exceed its own water resources (LADWP, 2002).

Adverse impacts to water supply or delivery are not expected from development of the lots. According to the Department of Water and Power (DWP) for the City of Los Angeles, the lots proposed for sale could be supplied with water from the municipal system subject to the Water System Rules of the DWP. In addition, the UWMP 2002 Annual Update indicates that the LAPWD is well-positioned to continue to meet the immediate demands of its customers (LADWP, 2002).

Wastewater

The City of Los Angeles Department of Public Works, Bureau of Sanitation provides sewer service to all areas within the City boundary. The Bureau provides planning and financial management, and maintains and operates the wastewater collection and treatment system. The Bureau of Engineering provides design and construction engineering. The wastewater

system in the PDR and Marina de Rey area includes a wastewater collection system, the Hyperion Wastewater Treatment Plant, and the discharge of treated effluent to Santa Monica Bay. The wastewater collection system serving Los Angeles consists of about 6,000 miles of pipe, and about 150 miles of outfall sewers and major interceptors. The interceptor sewer line in the project area is in the North Outfall Sewer (NOS), and is one of the four major interceptor sewers used to convey wastewater to the Hyperion Treatment Plant. The Plant currently receives an average flow of 360 million gallons per day (MGD), and has the capacity to accommodate up to 450 MGD. Peak wet weather flows up to 1,000 MGD can be handled for short periods (City of Los Angeles, 2001). Several collection system improvements are currently in progress to accommodate anticipated growth through the year 2010.

The Hyperion Treatment Plant currently receives an average flow of 360 MGD, and has an excess capacity of approximately 90 MGD. In addition, peak wet weather flows up to 1,000 MGD can be handled for short periods (City of Los Angeles, 2001).

The Hyperion Treatment Plant has the capacity to receive wastewater flows above the current average levels being processed. Adverse impacts to wastewater disposal are not expected from development of the lots (see Section IX, *Hydrology and Water Quality*). According to the Bureau of Sanitation, the Hyperion Treatment Plant has sufficient capacity to accommodate the development of 36 lots in the PDR area. Therefore, development would not be expected to require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. However, confirmation from the Bureau of Sanitation that the Hyperion Treatment Plant has sufficient capacity to serve the developed lots was obtained in 2000. Therefore, the EIR will verify that this information is still current and accurate.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The project site is located within a highly developed area, with developed stormwater drainage facilities in place. Development would not require or result in the construction of new community stormwater drainage facilities or expansion of existing community facilities. For more information, see Section IX, *Hydrology and Water Quality*.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Adverse impacts to water supply or delivery are not expected from development of the lots. According to LADWP, the lots proposed for sale could be supplied with water from the municipal system subject to the Water System Rules of the DWP. In addition, the UWMP 2002 Annual Update indicates that the LADWP is well-positioned to continue to meet the immediate demands of its customers (LADWP, 2002).

However, confirmation from LADWP that it has sufficient capacity to serve the developed lots was obtained in 2000. Therefore, the EIR will verify that this information is still current and accurate.

e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

See item b), above.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The Los Angeles County Sanitation Bureau (LACSB) disposes of the refuse it collects into three landfills, two operated by private entities and one by the Los Angeles County Sanitation Districts: the Bradley Landfill, owned and operated by Waste Management, Inc.; the Sunshine Canyon Landfill, owned and operated by Browning Ferris Industries; and the Calabasas Landfill operated by the LACSB. According to the California Integrated Waste Management Board's (CIWMB) waste stream profiles, these landfills are not expected to reach capacity until 2020 (CIWMB, 2003). In addition, the LACSB contracts with several Material Recovery Facilities owned and operated by the private sector, to receive, clean, process, and market recyclables. The LACSB also has three city operations and several contracts with private contractors to accept, clean, grind, and mulch or compost yard trimmings.

Development would be expected to be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. However, potential impacts to the three landfills that currently serve the City will be considered further in the EIR.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Solid waste collection and disposal in the City of Los Angeles is carried out by both public and private refuse collection services and solid waste disposal facilities. The City has developed a strong waste management infrastructure including a myriad of reduction, recycling, composting, and reuse programs. The City has surpassed the state mandated 50% diversion rate, and for the year 2000 has achieved a 58.8% diversion rate (Bureau of Sanitation, 2001).

If the purchasers of the lots choose to develop them, all local policies and regulations governing solid waste disposal would apply. Development would be expected to comply with federal, state, and local statutes and regulations related to solid waste.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
MANDATORY FINDINGS OF SIGNIFICANCE— Does the project:				
a) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

IMPACTS ANALYSIS

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

In general, the proposed project (both the sale of the lots and potential future development) will not degrade the quality of the environment, reduce fish or wildlife habitat, cause a drop in fish or wildlife population, threaten to eliminate a plant or animal community, reduce the range of rare or endangered plant or animal or eliminate any important examples of California history or prehistory. The only exception to this are the potential impacts described in Section IV, *Biological Resources*. Two Clusters, 9 and 12 contain potential habitat that, if the lots were developed could cause a reduction in habitat for special animals. This is considered potentially significant and will be studied further in the EIR.

b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a

project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed project, in addition to past and future developments on the PDR and MDR area, and in the surrounding planned urban developments, would result in additional infilling for PDR and MDR. The CPUC approval of the SCG application would most likely lead to the connected actions of urban land development on all sites. The likely primary cumulative considerable effects are that of construction related runoff into the Ballona wetlands from potential construction on sites in PDR and the cumulative impact to local traffic. These are considered potentially significant and will be examined in greater detail in the EIR.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

The primary concern for adverse effects on human beings focuses on the potential risk of future releases of gas from abandoned wells located on each project cluster. These risks, although small, have the potential to pose either toxic or safety hazards to future occupants of these properties and until additional sampling and a risk assessment have been prepared to better asses these potential risks, the project represents potentially significant impacts which will be further evaluated in an EIR.

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APPENDIX A

BACKGROUND INFORMATION FOR ABANDONED WELLS AND CLUSTERS

APPENDIX A

BACKGROUND INFORMATION FOR ABANDONED WELLS AND CLUSTERS

Southern California Gas (SCG) maintained ownership of lots in Playa del Rey and Marina del Rey associated with wells utilized as oil production wells and those converted for gas storage operations. In order to operate and maintain such wells, sufficient land around each well was required to support the transport and operation of heavy equipment used in well servicing. There are 12 abandoned SCG wells located on the proposed project lots (see Table 1). Each cluster (two to four lots per cluster) of lots contains one well. Cluster 1 contains only a single well located on a single lot. Cluster 8 has two wells, each associated with either the 4 north lots or the 4 south lots.

DESCRIPTION OF ABANDONED WELLS

Joyce, Samarkand, 23-1, 29-1, and 29-2

These wells were part of the fluid system that removed underground saltwater that would otherwise fill the porous rock in the Storage Zone. The wells were abandoned because they did not produce significant amounts of water, and the cost to operate them exceeded the benefit.

Anglo, American Champ No. 1, and O&M 1

These wells were drilled in 1935 and abandoned in 1937 and 1936 respectively, because they were not producing oil in economically viable amounts. SCG did not operate these wells. However, SCG re-abandoned these wells in 1958 to bring their abandonment quality up to existing California Division of Oil, Gas and Geothermal Resources (DOGGR) standards. These wells were never involved in storage operations.

Hisey 1, Lormar 1, Merrill, and 13-1

These wells were located in a smaller, separate reservoir (in the same formation as the main area) that was not providing useable storage capacity. This reservoir became saturated with water in the 1970s and has not been used since then.

Troxel (MDR)

This observation well was located in a different reservoir and thus was not providing any value in the storage field.

DESCRIPTION OF CLUSTERS/LOTS

Cluster 1 - Lot 6 on the Corner of 81st Street and Berger Place (Figure I-1)

This lot is located at the northeast corner of 81st Street and Berger Place. Single-family homes border the project site on the north and east, and are located across 81st Street and Berger Place. The site is level, covered with grass, and has a brick divider wall of approximately four feet on two sides.

Cluster 2 - Lots 3, 4 on 82nd Street (Figure I-2)

This group of adjoining lots is located along the north side of 82nd Street. The lots are surrounded by single-family homes and are unfenced. The site is mostly level and contains vegetation, including trees and grass.

Cluster 3 - Lots 14-16 on 83rd Street (Figure I-3)

This group of adjoining lots is located at the corner of 83rd Street and Saran Drive. The lots are surrounded by single-family homes. There is a wooden fence with a brick base that borders one edge of the cluster. The site is level and contains vegetation, including mature trees and grass.

Cluster 4 - Lots 6, 7 on 85th Street (Figure I-4)

This group of adjoining lots is located along 85th Street and is surrounded by single-family homes. The site is mostly level, with mature vegetation, including trees, shrubs and grass. The site is unfenced.

Cluster 5 - Lot 11 on Saran Drive (Figure I-5)

This single lot is located along Saran Drive, south of Manchester Avenue. The lot is bordered on the west by Saran Drive, and on the east and north by commercial shops and offices. An apartment complex is located south of the lot, across an alley. The lot is unfenced and contains mature trees, with shrubs and grass. Dirt trails and utility poles traverse the site.

Clusters 6 and 7 - Lots 14-18 on 83rd Street (Figure I-6) and Lots 28-30 on Manchester Avenue (Figure I-7)

This group of adjoining lots is bordered on the north by 83rd Street and by Manchester Avenue. Single-family and apartment homes border the site on the east and west. The lots are unfenced and mounds of dirt are located throughout the site. The lots contain mature vegetation, including trees, shrubs, and grass. Dirt trails traverse through the site.

Cluster 8 - Lots 17-20 on 79th Street and Lots 82-85 on 83rd Street (Figure I-8)

This group of adjoining lots is bordered on the north by 79th Street and on the south by 83rd Street. The lots are bordered by residential development on the east and one home is located at the corner of Gulana Avenue and 83rd Street and is surrounded on two sides by the undeveloped lots. The lots are unfenced and contain mature vegetation, including trees, shrubs, and grass. Dirt trails traverse the site.

Cluster 9 - Lots 5, 6, 7, 8 on 83rd Street (Figure I-9)

These adjoining lots are surrounded by single-family residential development. The lots are accessed from the northern edge along 83rd Street. Adjacent to the lots on the south are several small apartment complexes. These lots are not fenced and are characterized by mature trees and a small grassy area with a bench.

Cluster 10 - Lots 5, 6, 7 on Calabara Avenue (Figure I-10)

These lots are bordered on the north and south by single-family homes. The lots are bordered on the west by Calabara Avenue and on the east by Falmouth Avenue. Steep slopes on Calabara Avenue characterize the lots approximately 25 feet higher than Falmouth Avenue. Surrounding residential homes are built into the slope, with the front entrances on Calabara Avenue and the rear yards along Falmouth Avenue. The lots are not fenced and the site contains a mix of low-growing vegetation on the slope, with some trees and shrubs along the northern and southern boundaries of the site.

Cluster 11 - Lots 18, 19 on Calabara Avenue (Figure I-11)

This group of adjoining lots is bordered on the west by Calabara Avenue and on the east by Falmouth Avenue. The lots are bordered on the north and south by single-family detached homes. Steep slopes, on Calabara Avenue, characterize the lots approximately 35 feet higher than Falmouth Avenue. The site is fenced and contains a retaining wall, which is present on a portion of the site. The site contains a mix of low-growing vegetation, with a few trees and shrubs along the northern and southern boundaries of the site.

Cluster 12 - Lots on Speedway in Marina del Rey (Figure I-12)

These two adjoining lots are located north of Union Jack Street and between Speedway Avenue and Venice Beach on the Marina del Rey (MDR) peninsula between the Santa Monica Bay and the channel of MDR. The site is bordered on the north and south by multi-family apartment buildings, on the west by Venice Beach, and on the east by alleyways, lanes, and Speedway Avenue. The lots are fenced and covered with moderately sparse grass and sand.

APPENDIX B

AIR QUALITY BACKGROUND INFORMATION

APPENDIX B

AIR QUALITY BACKGROUND INFORMATION

REGULATORY SETTING

FEDERAL

The National Ambient Air Quality Standards (NAAQS) have been established for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10}), and lead (Pb) (see Table B-1). These contaminants are referred to as criteria pollutants. Areas are classified under the federal Clean Air Act (CAA) as either "attainment" or "non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. The SCAB is designated as a non-attainment area for O_3, CO, and PM_{10}. The South Coast Air Basin (SCAB) is designated as an attainment area for SO_2 and lead, and a maintenance area for NO_2.

In addition to criteria pollutants, the Environmental Protection Agency (EPA) is concerned with Hazardous Air Pollutants (HAPs), which are substances with the potential to cause or contribute to an increase in mortality or an increase in serious illness, or may pose a present or potential hazard to human health. Title III of the 1990 Federal Clean Air Act Amendment (FCAAA) identified 189 HAPs. Control of toxic air emissions is implemented under Section 112 (HAPs) of the FCAAA. Implementation of the NAAQS to control criteria pollutants has also resulted in the reduction of toxic air contaminants.

STATE STANDARDS

In 1967, California's legislature passed the Mulford-Carrel Act, which established the California Air Resources Board (CARB). The CARB sets state air quality standards for criteria pollutants. The state standards for these pollutants are more stringent than the corresponding federal standards. As in the federal CAA, the California CAA classifies areas as either being in attainment or non-attainment for these criteria pollutants. Areas designated as non-attainment are then given a time frame to achieve attainment.

To control HAPs and Toxic Air Contaminants (TAC), the California legislature has adopted several state bills. A more thorough description of HAP and TAC regulations can be found in the Hazards Section of this document.

LOCAL REGULATIONS

The PDR and MDR lots are is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), which adopted an Air Quality Management Plan (AQMP) in 1979, which has been revised and amended several times. Currently, the SCAQMD is operating under the 1997 AQMP and the

TABLE B-1
AMBIENT AIR QUALITY STANDARDS FOR CRITICAL POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	0.12 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Motor vehicles.
	8 hours	---	0.08 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9 ppm	9.0 ppm		
Nitrogen Dioxide (NO_2)	Annual Average	---	0.05 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.25 ppm	---		
	1 hour	0.25 ppm	---		
	24 hours	0.04 ppm	0.14 ppm		
Suspended Particulate Matter (PM-10 , PM-2.5)	Annual Geometric Mean	30 ug/m^3 (PM_{10})	65 ug/m^3 ($PM_{2.5}$)	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	Annual Arithmetic Mean	---	50 ug/m^3 (PM_{10})		
	24 hours	50 ug/m^3 (PM_{10})	150 ug/m^3 (PM_{10}) 15 ug/m^3 ($PM_{2.5}$)		
Lead	Monthly	1.5 ug/m^3	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m^3		

SOURCE: California Air Resources Board, *Ambient Air Quality Standards*, January 25, 1999.

1999 amendment to the 1997 ozone portion of the AQMP. The SCAQMD is in the process of preparing the proposed 2003 Air Quality Management Plan (AQMP) for the South Coast Air Basin. The 2003 AQMP seeks to demonstrate attainment with state and federal air quality standards and will incorporate a revised emissions inventory, the latest modeling techniques, and updated control measures remaining from the 1997/1999 State Implementation Plan and new control measures based on current technology assessments.

The SCAQMD regulates air pollutants in the SCAB through the promulgation of rules and regulations and through the issuance of permits to operate to local industry. Permits establish conditions on specific pieces of equipment and on industrial processes. Currently, the nearby SCG Playa del Rey Gas Storage Facility (PDRGSF) has ten permitted pieces of equipment and is operating under 35 different SCAQMD regulations. None of the permitted or regulated sources are located on or adjacent to the lots included in the scope of this Initial Study.

ANTICIPATED EFFECTS ON PROJECT OPERATION

Originally, the wells and associated lots described in this document were used or could have been used for monitoring of gases and liquids in the storage zones (6000 ft below ground surface) and may be developed for later use if needed for the gas storage system. At present, the lots provide no useful or commercially viable contribution to the operations and maintenance of the PDRGSF. SCG's remaining wells and facilities are adequate for continued operations of the gas storage facility following the proposed sale of the 36 lots.

CRITERIA POLLUTANTS

OZONE (O_3)

The most pervasive air quality problem in the air basin is high O_3 concentrations. Ozone is not emitted directly, but is a secondary pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic compounds (ROC) and nitrogen oxides (NO_X). Significant O_3 production generally requires about three hours in a stable atmosphere with strong sunlight. Ozone is a regional air pollutant because it is transported and diffused by wind concurrent with the photochemical reaction process. Motor vehicles are the major source of ozone precursors in the basin. During late spring, summer and early fall, light winds, low mixing heights, and abundant sunshine combine to produce conditions favorable for maximum production of O_3. Ozone causes eye and respiratory irritation, reduces resistance to lung infection, and may aggravate pulmonary conditions in persons with lung disease. Ozone is also damaging to vegetation and untreated rubber.

CARBON MONOXIDE (CO)

Carbon Monoxide is a non-reactive pollutant emitted primarily by motor vehicles. Ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic and are also influenced by meteorological factors such as wind speed and atmospheric mixing. When strong surface inversions formed on winter nights are coupled with near-calm winds, CO from automobile exhaust becomes concentrated. The highest CO levels within the Basin are almost always measured during the winter. Carbon Monoxide interferes with the transfer of oxygen to the blood. It may cause dizziness and fatigue and can impair central nervous system functions. The one-hour CO standard has not been exceeded at the closest Monitoring Station in the last five years.

NITROGEN DIOXIDE (NO_2)

There are two oxides of nitrogen which are important in air pollution: Nitric Oxide (NO) and NO_2. Nitric oxide, along with some NO_2, is emitted from motor vehicle engines, power plants, refineries, industrial boilers, ships, aircraft, and railroads. Nitrogen dioxide is primarily formed when NO reacts with atmospheric oxygen in the presence of ROC and sunlight; the other product of this reaction is ozone. Nitrogen dioxide is the whiskey brown colored gas, more commonly known as smog, readily observed during periods of heavy air pollution. Concentrations of NO_2 are highest during the late fall and winter. Nitrogen dioxide increases damage from respiratory disease and irritation, and may reduce resistance to certain infections. The state standard for NO_2 has not been exceeded in the last five years in the project area.

PARTICULATE MATTER

PM-10 and PM-2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM-10 and PM-2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

The primary sources of PM-10 emissions in the project area are mainly from urban sources, dust suspended by vehicle traffic and entrained road dust, and secondary aerosols formed by reactions in the atmosphere. Traffic generates particulate matter and PM-10 emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM-10 is also emitted by burning wood in residential wood stoves and fireplaces. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants. PM-10 standards have been exceeded on an average of 6.8 days per year in the project area between 1997 and 2001.

TOXIC AIR CONTAMINANTS (TACS)

Toxic Air Contaminants (TACs) are pollutants known or suspected to cause cancer or other serious health effects such as birth defects. TACs may also have significant adverse environmental and ecological effects. Examples of TACs include benzene, diesel particulate, hydrogen sulfide, methylchloride, 1,1,1-trichloroethane, toluene, and metals such as cadmium, mercury, chromium, and lead. Health effects from TACs vary depending on the specific toxic pollutant but may include cancer, immune system damage, as well as neurological, reproductive, developmental, and respiratory problems.

According to the EPA, approximately 50% of the TACs we are exposed to come from mobile source emissions. The EPA and the CARB are both concerned over diesel particulate matter emissions. The

EPA has published its final rule to control emissions of hazardous air pollutants from mobile sources, in the March 29, 2001 Federal Register. The CARB approved a comprehensive diesel risk reduction plan in September 2000. Health risks associated with TACs will be summarized in the Hazard Section of this Initial Study.

HYDROGEN SULFIDE (H_2S)

Hydrogen Sulfide is a colorless, flammable gas with a distinctive "rotten egg" odor. Anaerobic decay processes involving sulfur-bearing materials may create H2S naturally. Natural decay as an H_2S source, however, is quite limited. Most commonly, H_2S is released from petroleum resource operations when underground natural gas contains a substantial fraction of H_2S. Whereas the cap rock over underground accumulations of such gas within various Los Angeles Basin oilfields is generally impermeable, compromise of that cap layer has occurred through petroleum extraction from wells drilled through the cap. Although abandoned wells are sealed to minimize future leakage of H_2S-bearing gas, some wells may leak with passing time.

The SCAQMD has recorded 60 odor complaints since 1988 linked directly to the PDRGSF[9]. In addition, several wells in the Ballona Wetlands and Marina del Rey area have been reported as "leaking" by various citizens and agencies.

In January 2001, Giroux & Associates performed a screening level monitoring for H_2S. Utilizing passive sampling badges, 100 air samples were taken over a five-day period. Giroux & Associates analysis concludes that except near storm drains, there was minimal indication of any H_2S. The analysis further stated that it is unknown if this observed material was due to biogenic decay within a large adjacent storm drain, due to a leaking well, or due to any Southern California Gas (SCG) operations. Due to the uncertainty of this screening level monitoring, a more comprehensive H_2S monitoring program is currently being undertaken in support of analysis this proposed project. Results from this detailed monitoring will be reported in an EIR.

METHANE

Methane is a colorless, odorless, flammable gas, which is the main constituent of natural gas. In the past the migration of methane in the form of natural gas to surface areas has resulted in fires and explosions. Some studies have hypothesized that natural gas can migrate up through abandoned well heads.[10] Due to these concerns, methane migration monitoring was conducted at representative well sites located on the bluff at Playa del Rey (Lor Mar), and at the Troxel well (Cluster 12) in Marina del Rey. Giroux & Associates conducted monitoring within a cavity created by encasing the subsurface wellhead within a hollow enclosure with surface access. Methane measurements were made with a flame ionization detector for organic gases (Photovac Micro-FID) for a month after equipment installation. Troxel well (Marina del Rey) probe installation encountered pockets of crude oil mixed with sand that apparently spilled when this was an operating oil well. Nothing in the report findings suggested any clear risk of

9 South Coast Air Quality Management District Complaint Summary Report, last dated report 04/18/03.
10 Gas Migration from Oil and Gas Fields and Associated Hazards, Journal of Petroleum Science and Engineering, 9 (1993) 223-238 Department of Civil Engineering, University of Southern California, Gurevich, A.E., Endres, B.l., Robertson, J.O., and Chelingar, G.V.

home construction atop these two well sites. (Giroux & Associates, November 5, 2001) It is not known to what extent these findings can be generalized to all the lots proposed for sale. To this end, an in depth methane migration monitoring study at all twelve lot clusters is presently underway to verify the conclusions reached in the last study and assist in a risk assessment of these properties. The results of this study will be included in an EIR.

ODORS

Though offensive odors rarely cause any physical harm, they are unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed and direction, and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between a receptor and the source (buffer zone) to an acceptable level will mitigate odor impacts. Additional odor monitoring is presently underway and the results will be included in an EIR.

APPENDIX C

BIOLOGY BACKGROUND INFORMATION

APPENDIX C

BIOLOGY BACKGROUND INFORMATION

REGULATORY SETTING

FEDERAL

FEDERALLY-LISTED SPECIAL STATUS SPECIES

The U.S. Fish and Wildlife Service (USFWS) is the primary federal regulatory authority for biological resources within Los Angeles County. This agency provides regulatory protection for listed animals and plants present in the Los Angeles County area that are protected species by the Federal Endangered Species Acts (FESA). Federally listed threatened and endangered species and their habitats are protected under provisions of the FESA. "Take" under FESA includes activities such as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect. Harm specifically includes significant habitat modification or degradation. The USFWS regulates activities that may result in take of individuals. Candidate species proposed for listing also receive special attention from federal agencies during their review.

WATERS OF THE U.S.

The U.S. Army Corps of Engineers (USACE) has jurisdiction over waters of the U.S. under Section 404 of the Clean Water Act and navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899. Waters of the U.S. (jurisdictional waters) under Section 404 include all waters used, or potentially used, for interstate commerce. Such waters include wetlands, tidal waters, tributary waters, and other waters such as lakes. Wetlands are defined as habitats that have three important characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Wetlands include marshes, meadows, swamps, bogs, floodplains, basins, and seeps. Wetlands may also include less obvious areas such as seasonal ponds, seasonally wet pastures, or seasonal meadows. Navigable waters of the U.S. subject to USACE jurisdiction under Section 10 include all lands below mean high water, including former tidal areas that are behind a dike but not yet filled above mean high water. Project activities that will result in fill, dredging, destruction, or alteration of Waters of the U.S. must be in compliance with permit requirements of the USACE.

MIGRATORY BIRDS

The Federal Migratory Bird Treaty Act (FMBTA, 16 U.S.C., Sec. 703, Supp. I) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Migratory is defined broadly in the FMBTA so that most native birds fall under its provisions. The

FMBTA is typically applied on domestic projects to prevent injury or death of nesting birds and their chicks.

STATE

STATE-LISTED SPECIAL STATUS SPECIES

The California Department of Fish and Game (CDFG) is the primary state regulatory authority for biological resources within Los Angeles County. These agencies provide regulatory protection for listed animals and plants present in the Los Angeles County area that are protected species by the California and federal Endangered Species Acts (CESA and FESA). State-listed rare, threatened, and endangered species are protected under provisions of CESA. Activities that may result in take of individuals (e.g., hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill) are regulated by the CDFG. CDFG has interpreted "take" to include the destruction of nesting and foraging habitat necessary to maintain viable breeding populations of relevant state threatened or endangered species.

SPECIES OF SPECIAL CONCERN AND PROTECTED SPECIES

The CDFG has produced lists of species of special concern that serve as watch lists. Species on these lists either are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. These species may receive special attention during environmental review, and may require mitigation under the California Environmental Quality Act (CEQA) if impacts are substantial. The California Fish and Game Code also provides lists of vertebrate species that are designated "fully protected." Such species cannot be taken or possessed without a permit. Table C-1 provides information regarding potential occurrence of special status species and sensitive habitats at the lots.

TABLE C-1
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES AND SENSITIVE HABITATS AT THE PDR and MDR LOTS

Common Name ***Scientific Name***	**Status** **FWS/CDFG/CNPS**	**General Habitat**	**Potential to Occur at PDR and MDR Lots**
		LISTED SPECIES	
PLANTS			
Ventura marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	FE/CE/1B	Coastal salt marsh.	**Low Potential.** Only known at one site in Ventura county. Historically occurred at Ballona marshes on north side of Marina Del Rey in early 1900s.
San Fernando Valley spineflower *Chorizanthe parryi var fernandina*	FC/CE/1B	Coastal dune scrub.	**Low Potential.** Occurred near Ballona Creek at Marina Del Rey in early 1900's.
Beach spectaclepod *Dithyrea maritima*	FSC/CT/1B	Coastal sand dunes and coastal scrub.	**Low Potential.** Occurred at Ballona marshes at Marina Del Rey in early 1900s.
ANIMALS			
Mammals			
Pacific pocket mouse *Perognathus longimembris pacificus*	FE/CSC	Sandy to rocky soils in coastal sage scrub in southern coastal plains - possibly extinct.	**Low Potential.** Historically occurred at Marina Del Rey in 1938. Suitable habitat for this species does not occur within the PDR and MDR Lots.
Birds			
Western snowy plover (nesting colony) *Charadrius alexandrinus nivosus*	FT/CSC	Sandy beaches on marine and estuarine shores - requires sandy, gravely, or friable soils for nesting.	**Low Potential.** Historically nested at Playa Del Rey and Docweiler State Beach 1894 - 1914. No suitable nesting habitat at PDR and MDR Lots.
California black rail *Laterallus jamaicensis coturniculus*	FSC/CT	Coastal salt marsh.	**Low Potential.** Reportedly occurred at Playa Del Rey in 1928. No suitable nesting habitat at PDR and MDR Lots.
Belding's savannah sparrow *Passerculus andwhichensis beldingi*	FSC/CE	Nests in Southern California coastal marshes - frequents pickleweed in a few scattered saline emergent wetlands from Santa Barbara County south. Nests on the ground under vegetation.	**Low Potential.** Observed on South side of Ballona Creek west of Culver Blvd. and Jefferson Blvd. intersection in 2001. No suitable nesting habitat within PDR and MDR Lots.
Coastal California gnatcatcher (nesting) *Polioptila californica californica*	FT/CSC	Low coastal sage scrub in arid washes, on mesas and slopes.	**Low Potential.** Reported at Baldwin Hills in Culver City vicinity. No suitable nesting habitat within PDR and MDR Lots.

TABLE C-1 (Continued)
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES AND SENSITIVE HABITATS AT THE PDR and MDR LOTS

Common Name ***Scientific Name***	**Status** **FWS/CDFG/CNPS**	**General Habitat**	**Potential to Occur at PDR and MDR Lots**
		LISTED SPECIES (Continued)	
Birds (cont.)			
California least tern (nesting colony) *Sterna antillarum browni*	FE/CE	Nests along the coast from San Francisco Bay south to northern Baja California - colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas.	**Low Potential.** Observed nesting at Marina Del Rey and Playa Del Rey in 1996 and 1987. No nesting habitat at PDR and MDR Lots.
Invertebrates			
El Segundo Blue Butterfly *Euphilotes battoides allyni*	FE/--	Coastal dunes with adult and larva hostplant *Eriogonum parvifolium.*	**Low Potential.** Populations known from three fragments of habitat, with El Segundo Dunes west of LAX Airport being the largest site. No hostplants observed at PDR and MDR Lots
		SPECIES OF SPECIAL CONCERN	
Mammals			
Pallid bat *Antrozous pallidus*	--/CSC	Roost in caves, crevices, open buildings, mines and tunnels, feeding mostly on ground insects; locally common species of low elevations in California.	**Low Potential.** No reported occurrences. Suitable habitat for this species does not occur at the project area.
Western mastiff bat *Eumops perotis*	FSC/CSC	Roosts in crevices on cliff faces, high buildings, trees and tunnels foraging on high flying insects; uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey Co. southward through southern California, from the coast eastward to the Colorado Desert.	**Low Potential.** No reported occurrences. Suitable habitat for this species does not occur within the project area.
Long-eared myotis *Myotis evotis*	FSC/--	Roosts in buildings, crevices, under bark, snags, feeding on arthropods; occurs along the entire coast.	**Low Potential.** No reported occurrences. Suitable habitat for this species does not occur at the project area.
Townsend's big eared bat *Plecotus townsendii townsendii*	FSC/CSC	Roosts in caves, mines tunnels and buildings, feeding on moths; found in all but subalpine and alpine habitats, and may be found at any season throughout its range; abundant in mesic sites.	**Low Potential.** No reported occurrences. Suitable habitat for this species does not occur within the project area.

TABLE C-1 (Continued)
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES AND SENSITIVE HABITATS AT THE PDR and MDR LOTS

Common Name ***Scientific Name***	**Status** **FWS/CDFG/CNPS**	**General Habitat**	**Potential to Occur at PDR and MDR Lots**
		SPECIES OF SPECIAL CONCERN (Continued)	
Mammals (cont.)			
Yuma myotis *Myotis yumanensis*	FSC/CSC	Roosts with other species in buildings, mines, caves and crevices, feeding on flying insects; found in a wide variety of habitats ranging from sea level to 3300 m (11,000 ft), but it is uncommon to rare above 2560 m (8000 ft); optimal habitats are open forests and woodlands with sources of water over which to feed.	**Low Potential.** No reported occurrences. Suitable habitat for this species does not occur within the project area.
Birds			
Burrowing owl *Athene cunicularia*	FSC/CSC	Open, flat, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation with ground squirrel burrows.	**Low Potential.** Reported in vicinity of Playa Del Rey at junction of Culver Blvd. and Jefferson Blvd.
Reptiles			
Southwestern pond turtle *Clemmys marmorata pallida*	FSC/CSC	Lakes, ponds, reservoirs, and slow-moving streams and rivers, primarily in foothills and lowlands.	**Low Potential.** Reported at Marina Del Rey in 1987. No suitable habitat at PDR and MDR Lots.
Invertebrates			
Sandy beach tiger beetle *Cicindela hirticollis gravida*	FSC/--	Clean, dry light-colored sandy areas adjacent to non-brackish water.	Observed on Dockweiler Beach at Playa Del Rey in 1979 about 1/3 mile west of project site.
Globose dune beetle *Coelus globulus*	FSC/--	Foredunes and sand hummocks; burrowing beneath sand surface commonly under dune vegetation.	**Low to Moderate.** Historically occurred on foredunes bordering Dockweiler Beach. Marginally suitable habitat occurs at Cluster 12 (Marina Del Rey).
		SPECIES ON OTHER LISTS	
PLANTS			
Southern tarplant *Centromadia parryi ssp. australis*	--/--/1B	Margins of marshes and swamps, in grassland, and in vernal pools often on disturbed sites.	**Low Potential.** Occurred at Ballona marshes at Marina Del Rey in early 1900's; not observed in 1997. No suitable habitat at PDR and MDR Lots.
Orcutt's pincushion *Chaenactis glabriuscula var. orcuttiana*	--/--/1B	Coastal bluff scrub and coastal dunes.	**Low Potential.** Reported at Dockweiler Beach at Playa Del Rey in 1980. No suitable habitat at PDR and MDR Lots.

TABLE C-1 (Continued)
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES AND SENSITIVE HABITATS AT THE PDR and MDR LOTS

Common Name ***Scientific Name***	**Status** **FWS/CDFG/CNPS**	**General Habitat**	**Potential to Occur at PDR and MDR Lots**
		SPECIES ON OTHER LISTS (Continued)	
Plants (cont.)			
Coulter's goldfieds *Lasthenia glabrata ssp. coulteri*	--/--/1B	Coastal salt marshes and swamps, grassland, and vernal pools often on alkaline soils.	**Low Potential.** Occurred at Ballona marshes at Marina Del Rey in early 1900's; not observed in 1981. No suitable habitat at PDR and MDR Lots.
Brand's phacelia *Phacelia stellaris*	--/--/1B	Open areas of coastal scrub and coastal sand dunes.	**Low Potential.** Historically occurred at Playa Del Rey in the 1940's. No suitable habitat at PDR and MDR Lots.
Ballona cinquefoil *Potentilla multijuga*	--/--/1A	Brackish meadows and seeps in Los Angeles County.	**Low Potential.** Occurred at Ballona marshes at Marina Del Rey in late 1800's; possibly extirpated.
ANIMALS			
Invertebrates			
Belkin's dune tabanid fly *Brennania belkini*	--/*	Coastal sand dunes.	**Low Potential.** Known to occur at El Segundo Dunes in 1987 and Playa Del Rey east of Vista Del Mar in 1980.
Monarch butterfly *Danaus plexipus* (overwintering sites)	--/*	Dense, wind protected tree groves (eucalyptus, Monterey pine, Monterey cypress) near the coast from northern Mendocino to Baja California.	**Moderate Potential.** Numerous observed in 1988, 1990 and December 1997 in dense eucalyptus grove on the south edge of Ballona wetlands. Marginally suitable habitat for this species occurs at Cluster 9.
Henne's eucosman moth *Eucosma hennei*	--/*	Endemic to El Segundo Dunes.	**Low Potential.** Reported to occur at El Segundo Dunes west of LAX airport in 1984.
Lange's El Segundo dune weevil *Onychobaris langei*	--/*	Coastal sand dunes, endemic at El Segundo dunes.	**Low Potential.** Historically occurred at El Segundo Dunes west of LAX airport in 1938.
Salt marsh skipper *Panoguina errans*	--/*	Coastal salt marsh - host plants include *Spartina* sp. or *Distichlis spicata*- flight season is June - September.	**Low Potential.** Occurs at Ballona salt marsh. No suitable habitat at PDR and MDR Lots.
Dorothy's El Segundo dune weevil *Trigonoscuta dorothea*	--/*	Coastal sand dunes in Los Angeles County.	**Low Potential.** Reported to occur at El Segundo Dunes west of LAX airport and south of Ballona Creek in 1980.

TABLE C-1 (Continued)
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES AND SENSITIVE HABITATS AT THE PDR and MDR LOTS

Common Name ***Scientific Name***	**Status** **FWS/CDFG/CNPS**	**General Habitat**	**Potential to Occur at PDR and MDR Lots**
		SPECIES ON OTHER LISTS (Continued)	
Invertebrates (cont.)			
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	--/*	Coastal lagoons and salt marshes from Sonoma County south to San Diego County.	**Low Potential.** Reported to occur along Ballona Creek in 1974. No suitable habitat at PDR and MDR Lots.
		SENSITIVE HABITATS	
Southern coastal salt marsh	--/S2.1/--	Typically, *Frankenia* sp., *Suaeda*, and/or *Salicornia* subterminalis often occur along the upper landward edges of the marshes; *Salicornia bigelovii*, *S. virginica* and *Batis maritima* at middle elevations; and *Spartina* closest to open water.	**Absent.** Occurs at mouth of Ballona Creek, between Marina Del Rey on the north and Del Rey Bluffs on the south; creek diked and marsh does not get regular tidal flow.
Southern dune scrub	--/S1.1/--	Dominant species at El Segundo Dunes include *Ericameria ericoides, Lupinus chamissonis, Isomeris arobrea, Rhus integrifolia, Eriogonum parvifolium.*	**Absent.** El Segundo Dunes, west of LAX airport.

Status Codes:

Federal Categories (U.S. Fish and Wildlife Service)

FE = Listed as Endangered by the Federal Government

FT = Listed as Threatened by the Federal Government

FPT = Federally proposed for listing as Threatened

FSC = Federal Special Concern Species (former Category 2 candidates)

State Categories (California Dept. of Fish and Game)

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CSC = State Special Concern Species

* = California Department of Fish and Game, Natural Diversity Database. January 2003. Special Animals List. Biannual publication, Mimeo.
3511 = Fully protected species (California Fish and Game Code).
3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls).

High Potential = Species expected to occur and meets all habitats as defined in list.
Moderate Potential = Habitat only marginally suitable, or considered suitable but not in species geographic range.
Low Potential = Habitat does not meet species requirements as currently understood in the scientific community.
-- = No listing status.

SOURCE: CDFG 2003; CDFG California Wildlife Habitat Relationship (WHR);

PROTECTION OF RAPTORS

Birds of prey are protected in California under the California Fish and Game Code, §3503.5. Under §3503.5, it is unlawful to take, possess, or destroy any raptors or owls or to take, possess, or destroy the nest or eggs of raptors or owls. Disturbance that causes nest abandonment or loss of reproductive effort is considered a taking by the CDFG. Construction disturbance during the breeding season can result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Any loss of fertile eggs or nesting raptors or any activities resulting in nest abandonment are considered a significant impact.

CALIFORNIA NATIVE PLANT SOCIETY

Vascular plants may be listed as rare or endangered in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, even if those species are not listed under CESA or FESA. Lists produced by CNPS are subject to extensive scientific review and are recognized by botanists with the state and federal government as authoritative. Under CEQA, plants on List 1B can be treated as if they are state or federally listed. These species are categorized as follows:

- List 1A. Plants presumed extirpated in California
- List 1B. Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2. Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3. Plants About Which We Need More Information - A Review List
- List 4. Plants of Limited Distribution - A Watch List

LOCAL

LOS ANGELES COUNTY

Pursuant to Title 22, Part 16, Section 22.56.2060, Los Angeles County requires an oak tree permit for any activity that involves cutting, destroying, removing, relocating, inflicting damage[11] or encroaching into a protected zone[12] of any *tree* of the *oak* genus which is (a) 25 inches or more in circumference (eight inches in diameter) as measured four and one-half feet above mean natural grade; in the case of an *oak* with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four and one half feet above mean natural grade, on any lot or parcel of land within the unincorporated area of Los Angeles County, or (b) any *tree* that has been provided as a replacement *tree*, pursuant to Section 22.56.2180, on any lot or parcel of land within the unincorporated area of Los Angeles County, unless an *oak tree* permit is first obtained.

Los Angeles County (County) drafted an amended Protected Tree Ordinance (Title 22- Planning and Zoning of the Los Angeles County Code) on the January 10, 2002. In addition to protecting oak trees, the

[11] "Damage" includes any act causing or tending to cause injury to the root system or other parts of a tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, or by paving, changing the natural grade, trenching or excavating within the protected zone of an oak tree.

[12] "Protected zone" shall mean that area within the dripline of an oak tree and extending there from to a point at least five feet outside the dripline, or 15 feet from the trunks of a tree, whichever distance is greater. (Ord. 88-0157 § 2, 1988: Ord. 82-0168 § 2 (part), 1982.)

proposed draft amendment would establish regulations to preserve California walnut and western sycamore, as well as modify encroachment exemptions. This proposed draft amendment has not been adopted (Starks, L. Los Angeles County Department of Regional Planning, pers. comm., July 8, 2003.

CITY OF LOS ANGELES

The following regulation is set forth in the City of Los Angeles Municipal Code:

"No person shall relocate the or remove any oak tree, as that term is defined in Section 46.01, where the said oak tree is located on a lot larger than one acre and is not regulated pursuant to Article 7 of Chapter I of this Code, without first having applied for and obtained a permit…" (City of Los Angeles Municipal Code, Chapter IV, Article 6, Section 46.02).

BIOLOGICAL SETTING

The Marina del Rey (MDR) and Playa del Rey (PDR) lots are situated within an urban environment and lie outside the boundaries of the Coastal Zone (see Section 10, Land Use and Planning). The MDR lot (Cluster 12) lies north of the Marina del Rey Entrance Channel. The site is bordered by residential apartment buildings on the north and south, Venice Beach on the west, and an alleyway on the east. The Cluster 12 site supports a small degraded coastal dune scrub plant community. The site was seeded with an ornamental wildflower mix, but also supports some native species, including dune tansy (*Tanacetum camphoratum*). Dominant non-native species observed include iceplant (also commonly referred as hottentot fig) (*Carpobrotus edulis*) and barley (*Hordeum* sp.). Sea rocket (*Cakile edentula*), a common non-native dune plant, was also observed. The site was heavily disturbed in the past.

The PDR lots (Clusters 1-11) are located on the southern California coast approximately one-half mile south of the Ballona wetlands, one mile east of Dockweiler Beach State Park, and one mile north of the northern boundary of Los Angeles International Airport (LAX). The Playa del Rey lots are on the plateau of a coastal bluff from which a steep cliff descends approximately 100 feet to Ballona Creek and its associated wetlands. The bluff itself is relatively flat with very little aspect. The Ballona Creek area primarily supports non-degraded and degraded wetlands, agricultural fields (which were former wetlands) and environmental sensitive upland areas as designated by the California Department of Fish and Game (Los Angeles County, 1995). A residential and private open space buffer zone separates the Playa del Rey project lots from the Ballona Creek wetlands area.

The PDR lots are of varying sizes. Most sites are surrounded by residential uses such as adjacent lots with one-family residences or small apartment buildings and residential streets. All of the sites at PDR support primarily non-native, landscaped vegetation on disturbed sandy soils. The dominant plant species observed include iceplant, English ivy (*Hedera helix)*, and landscaping lawn grass. Eucalyptus (*Eucalyptus globulus*) is the dominant tree species observed at most of the sites. Some sites have been mowed completely or partially for aesthetics and fire reduction. In non-mowed areas, ruderal vegetation has established, including non-native annual grasses and herbs.

COMMON WILDLIFE

Very few wildlife species were detected during the surveys (Chambers, August 2000). Those detected and expected at the site are indicative of the urban landscaping that covers the project area. Wildlife species observed include those typical of urban areas, including American crow, sparrow, house finch, European starling, domestic pigeon and rock dove. Common insects, including ants, honey bee and solitary bee, were also observed at most of the sites. Trees larger than 12 inches diameter at breast height (DBH) were surveyed for the presence of raptor nests. No raptor nests were present. Although many native bird species inhabit the Ballona wetlands near the project, the lots included in the scope of this Initial Study provide little or no biological value to those species that may be found in the Ballona wetlands. No native mammal species were detected during the surveys, other than domestic dogs (*Canis familiaris*) and cats (*Felis domesticus*). Mammals that may inhabit the sites included the black and Norway rat (*Rattus rattus* and *R. norvegicus*) and the house mouse (*Mus musculus*).

SPECIAL STATUS SPECIES

Based on electronic database searches using California Natural Diversity Data Base (CNDDB) (CDFG, 2003), and California Native Plant Society Electronic Inventory (CNPS 2003), 31 species were considered in evaluating potential occurrence of special status species at the PDR and MDR lots. These included eight special status plants and 23 special status animal species.

No suitable habitat is present for any special status plant species due to the disturbed nature of the sites, including urban landscaping and grading for well installation and abandonment, and presence of invasive plant species at the PDR and MDR lots. There are no wetlands present to support Ventura marsh milk-vetch, southern tarplant, Coulter's goldfields or Ballona cinquefoil. Although special status plant species that occupy coastal dune habitats have historically occurred within the project vicinity, these species (including San Fernando Valley spineflower, beach spectaclepod, Orcutt's pincushion, and Brand's phacelia) have low potential occurrence.

Several special status invertebrate species are known to occur southwest of the PDR site near LAX airport. No host-plants (i.e., *Eriogonum parvifolium*) to support El Segundo butterfly were observed at the project site. However, the MDR (Cluster 12) project potentially supports marginally suitable habitat for special status beetles and other invertebrates. The Samarkand site (Cluster 9) supports an abundance of eucalyptus trees which potentially supports overwintering monarch butterfly, a special status species.

ESA conducted biological reconnaissance surveys in March 2003 at the MDR and PDR lots to update past reconnaissance surveys conducted by Chambers Group in March 2000. Both the 2003 and 2000 surveys documented existing biological conditions and assessed potential habitat to support special status plant and wildlife species. Entomological Consulting conducted species-specific surveys for globose dune beetle in June 2003. The MDR site (Cluster 12) supports the globose dune beetle, a federal species of concern, on a small degraded central dune scrub plant community (Arnold, R. A., pers. comm., June, 2003). A portion of this site was seeded with an ornamental non-native wildflower mix and is watered during the dry season. The introduction of non-native species, increased vegetation cover (especially on the degraded central dune scrub habitat inhabited by the beetle), and ground saturation (out of the normal

rainy season period) are factors that currently affect the beetle. Potentially significant impacts on the globose dune beetle will be analyzed further in the EIR.

Burrowing owl is a federal and state species of concern found throughout much of southern and central California, and has been observed within five miles of the area. This species often inhabits open areas with low-growing shrubs and has been observed in areas at the edge of cities. In March 2000 the Chambers Group conducted burrowing owl surveys which were equivalent to Phase I, II, and III of the protocol surveys developed by the Santa Cruz Predatory Bird Research Group (Chambers Group, August 2000). Results of past reconnaissance surveys conducted by Chambers Group in adjacent undisturbed areas indicated that small numbers of burrowing owls may inhabit “fringe” areas of sites along Calabara Avenue (near Cluster 10 and 11) and 79th Street (near Cluster 8). However, no burrowing owls or burrows for burrowing owls were observed during the March 2000 site visit (Chambers Group, August 2000).

Chambers Group (August 2000) conducted an inventory of trees with a diameter at breast height (DBH) of greater than six inches in March 2000 (Table C-2).

TABLE C-2
TREE INVENTORY AT THE PDR and MDR LOTS

Location (by Cluster Number)	Common Name	Scientific Name	Number of Trees Present (DBH >6")
Cluster 1	Fig	*Ficus* sp*	1
	Blue elderberry	*Sambucus mexicana*	1
Cluster 2	Eucalyptus	*Eucalyptus globulus**	9
Cluster 3	Victorian box	*Pittosporum undulatum**	3
	Smooth Arizona cypress	*Cupressus glabra**	3
	Eucalyptus	*Eucalyptus globulus**	6
Cluster 4	Bishop pine	*Pinus muricata**	3
	California redwood	*Sequoia sempervirens**	4
	Leyland cypress	*Cupressocyparis leylandii**	4
Cluster 5	Fig	*Ficus* sp*	2
	Canyon live oak	*Quercus chrysolepis*	1
	Maackia	*Maackia chinensis**	1
	Kangaroo thorn	*Acacia paradoxa**	5
	Palm	*Arecaceae*	3
Cluster 6	Bosnian pine	*Pinus leucodermis**	4
	Eucalyptus	*Eucalyptus globulus**	11
	Eastern red cedar	*Juniperus virginiana**	1
	Cypress	*Chamaecyparis* sp*	7
	Elm	*Ulmus* sp*	2
Cluster 7	Fig	*Ficus* sp*	1
Cluster 8	Carrotwood	*Cupaniopsis anacardioides**	2
	Brazillian peppertree	*Schinus terebinthifolius**	1
	Eucalyptus	*Eucalyptus globulus**	12
Cluster 9	Eucalyptus	*Eucalyptus globulus**	23
Cluster 10	Benjamin fig	*Ficus Benjamina**	1
	Trochodendron	*Trochodendron araliodes**	1
Cluster 11	Eucalyptus	*Eucalyptus globulus**	3
Cluster 12	--	--	0

* Indicates non-native to California or local area

SOURCE: Chambers Group, August 2000

APPENDIX D

CULTURAL AND HISTORICAL BACKGROUND INFORMATION

APPENDIX D

CULTURAL AND HISTORICAL BACKGROUND INFORMATION

HISTORY

The project area is located within territory occupied by the Gabrielino Native American group when Europeans first arrived in the region (Chambers, August 2000). Gabrielino settlement and subsistence patterns may extend back to the beginning of the late Prehistoric period, about A.D. 750. The Gabrielino were semi-sedentary hunters and gatherers.

Coastal groups collected shellfish and fished for estuary, nearshore, and kelp bed species. Dried fish and shellfish were exchanged for inland products such as acorns. The nuts were pounded into flour using stone mortars and pestles and then cooked as soup or gruel. Seeds from sage, grasses, goosefoot, and buckwheat were ground with stone manos and metates. Deer, rabbits, birds, and marine mammals were hunted with bow and arrow, nets, traps, and snares.

The Gabrielino lived in villages of up to 150 people located near permanent water sources and a variety of food resources (Chambers, August 2000). The village acted as the center of a territory from which resources were gathered. Small groups left the village for short periods to hunt, fish, and gather plant foods, as well as collect raw materials for tools, housing, and other utilitarian needs.

The period from 1000 B.C. to A.D. 750 is known as the Intermediate Period (Chambers, August 2000). During this period, mortars and pestles appear, indicating the beginning of acorn exploitation. Use of the acorn - a high-calorie, storable food source - probably allowed greater sedentism and a higher level of social organization. Large projectile points indicate that the bow and arrow, a hallmark of the Late Prehistoric Period, had not yet been introduced, and hunting was likely accomplished using the *atlatl* (spear thrower) instead. Settlement patterns during this time are not well understood. The semi-sedentary settlement pattern characteristic of the Late Prehistoric Period may have begun during the Intermediate Period, although lower population densities may have limited local territoriality.

The Milling Stone Period (about 6500 B.C. to 1000 B.C.) represents a long period of time characterized by smaller, more mobile groups, compared with later periods. These groups probably relied on a seasonal round of settlement, which included both inland and coastal residential bases (Chambers, August 2000). Seeds from sage and grasses, rather than acorns, provided calories and carbohydrates.

Although the Spanish inaugurated their system of missions in *Alta California* in 1769, the first Spanish explorers in this region visited the coastline much earlier (Chambers, August 2000). Juan Rodriguez Cabrillo arrived first in 1542, followed by Pedro de Unamuno in 1587, Sebastian Rodriguez Cermeño in 1595, and Sebastian Vizcaíno in 1602. After Vizcaíno's visit, 167 years passed without European exploration of the *Alta California* coastline until the first mission, at San Diego, was founded on the heels

of the Gaspar de Portolá land expedition in 1769 (Chambers, August 2000). Native American inhabitants of the Los Angeles Basin were taken to Mission San Gabriel, constructed in 1771 (Chambers, August 2000), and were called *Gabrielinos* by the Spanish because of their association with the mission.

The Spanish government made several large land grants in the Los Angeles Basin, but much of the land was not granted until Mexico gained independence in 1822 and the mission holdings were secularized in 1834. The current project area is located near the historic boundary between two Mexican ranchos: the 22,459-acre Sausal Redondo grant of 1837, and the 13,920-acre Ba1lona grant of 1839 (Chambers, August 2000). The Ba1lona rancho may have carried over from an earlier Spanish grant (Chambers, August 2000), with the name derived from the claimants' home city of Bayona in northern Spain (Chambers, August 2000). The smaller 2,219-acre Aguaje de la Centinela grant of 1844 (Chambers, August 2000) was situated just east of the project area.

During the Mexican administration of *Alta California*, the early pueblo of Los Angeles was located in the area west of the present Union Station downtown (Chambers, August 2000). The rest of the surrounding lands were divided into ranchos largely devoted to livestock and cultivation. California became an American state in 1850, but the population of southern California remained relatively low through the 1860s and 1870s, with cattle ranching continuing as the principal economic activity. However, a period of drought and expensive land title defense cases in U.S. courts resulted in the sale of many of the cattle ranches to Anglo-Americans.

Immigration to southern California increased substantially after Los Angeles was connected by the Southern Pacific Railroad to the transcontinental Central Pacific Railroad in San Francisco in 1876 (Chambers, August 2000). The Southern Pacific Railroad completed its own transcontinental connection from Los Angeles through Yuma in 1881 (Chambers, August 2000). During the 1880s, towns were hastily formed and land was sold to new arrivals from the east by real estate developers. Land speculation escalated as the second transcontinental railroad, the Atchison, Topeka, and Santa Fe, reached Los Angeles in 1886. The two railroads vied for customers by waging a fare war, encouraging many people to move to southern California.

The original Ba1lona Lagoon (now Marina del Rey) was proposed several times as the location of a commercial port facility for Los Angeles (Chambers, August 2000). With backing from the Santa Fe Railroad, Moses L. Wickes made the first proposal in 1886, investing $300,000 in the "La Ba1lona" project (Chambers, August 2000). The attempt failed, but the idea was revived under the name Playa del Rey in 1902 (Chambers, August 2000). The U.S. Army Corps of Engineers studied the lagoon in 1916, but concluded that its development as a commercial harbor was not feasible. The Los Angeles County Board of Supervisors commissioned another study in 1936, but later decided to concentrate all commercial port facilities at Los Angeles and Long Beach Harbors. During the late 1940s, the Corps of Engineers initiated a feasibility study for a recreational boat harbor at the lagoon. The Marina del Rey harbor and channel were created by dredging the lagoon, but the marina and associated breakwater were not completed until 1965 (Chambers, August 2000).

The first producing well in the Playa del Rey gas storage field was completed in 1929. By 1930, the field contained 141 producing wells. During 1934 and 1935, 50 additional wells were drilled in the Del Rey Hills area. During World War II, the federal government assumed control of the field. The Southern

California Gas (SCG) Company began operations after acquiring the field in 1953 as surplus government property (Chambers, August 2000). Since that time, parcels not occupied by gas wells have been developed as residential properties.

Three historic resources located within one mile of the Marina del Rey / Venice portion of the project area are listed on the National Register of Historic Places, including the Venice Canal Historic District, Warren Wilson Beach House, and American Trona Corporation building (Chambers, August 2000). All three are located north of and beyond the project area. The Venice Canals were created in 1905 as part of a unique residential subdivision. The Venice Canal System is also listed as City of Los Angeles Historic-Cultural Monument No. 270. The Warren Wilson Beach House is also located in Venice. The American Trona building was constructed in 1916 as a storage facility for raw salt.

Twelve additional historic resources are located within one mile of the overall project area, including a streetcar depot and 11 residential structures (Chambers, August 2000). None of these resources have been listed on the National Register of Historic Places. None occur within boundaries of the project area.

There are no California Historical Landmarks or California Points of Historical Interest listed within a one-mile radius of the overall project area (Chambers, August 2000). One of the prehistoric archaeological sites located within a one-mile radius of the project area, CA-LAN-47, is also listed as City of Los Angeles Historic-Cultural Monument No. 490, the site of the Gabrielino village of *Sa-Angna*.

ARCHEOLOGICAL

The Gabrielino lived in villages of up to 150 people located near permanent water sources and a variety of food resources (Chambers, August 2000). While away from the village, they established temporary camps and resource processing locations (Chambers, August 2000). Archaeologically, such locations are marked by bedrock mortars for acorn processing, manos and metates for seed grinding, and flaked lithic scatters indicating the manufacturing or maintenance of stone tools (usually of chert) used in hunting or butchering. Overnight stays in these field camps are indicated by fire-affected rock resulting from use in hearths (Chambers, August 2000).

The period from 1000 B.C. to A.D. 750 is known archaeologically as the Intermediate Period (Chambers, August 2000). During this period, mortars and pestles appear, indicating the beginning of acorn exploitation.

The Milling Stone Period (about 6500 B.C. to 1000 B.C.) represents a long period of time characterized by smaller, more mobile groups, compared with later periods. Although fewer projectile points occur (compared with later periods), faunal remains indicate that similar animals were hunted. Inland Milling Stone Period sites are characterized by numerous llanos, metates, and hammerstones, while shell middens are common at coastal sites. Coarse-grained lithic materials, such as quartzite and rhyolite, are more common than fine-grained materials, such as chert, in flaked stone tools from this time.

BALLONA WETLANDS PREHISTORY

Recent studies of landscape evolution in the Ballona Wetlands area of Southern California has revealed more detailed settlement information unique to the Westchester Bluffs. Homburg et al. (2001) conducted geoarchaeological analysis though extensive augering to reconstruct the succession of landforms and their effect on human occupation. Three distinct cultural adaptations were identified as they related to a particular stage of landscape and lagoonal development over the last 7,000 years:

1) Early Period (7,000-3,000 B.P.) marked by short-term, bluff-top occupations overlooking a shallow bay or lagoon;

2) Middle period (3,000-1,000 B.P.), characterized by an influx of population distributed on bluff-top and creek-edge settings; and

3) Late period (1,000-200 B.P.), marked by population aggregation around the lagoon.

Estuarine conditions prevailed at the present-day Ballona Wetlands until the lagoon development began around 6,200 B.P., when the lagoon began to slowly fill with alluvium up to around 2,000 B.P. As a result, human settlement tended to move westward through time; initial occupation began on the Baldwin Hills, shifted in the Middle Period to the Westchester Bluffs, and ended with large settlements at the mouth of Centinela Creek and the Ballona Lagoon (Homburg et al. 2001).

ARCHIVAL METHODS

A records search of all pertinent survey and site data was conducted at the South Central Coastal Information Center, Fullerton, California. The records were accessed by utilizing the Venice, Calif. USGS 7.5-minute quadrangle map, unsectioned, Township 2S, Range 15W. The review included the Playa Del Rey and Marina Del Rey sites along with a ¼ mile buffer that constituted the Project Area. Previous surveys and studies and archaeological site records were accessed as they pertained to the Project Area. Properties listed in the National Register of Historic Places, the California Register of Historic Resources, the California Inventory of Historic Resources (1976), the California Historical Landmarks (1996), and the California Points of Historical Interest (1992) were searched from within the project area.

ARCHIVAL FINDINGS

Twenty-eight archaeological sites have been recorded within a one-mile radius of the project area. Of these, 23 are prehistoric archaeological sites and 6 are historic archaeological sites.

Five of the prehistoric sites are located within the boundaries of the Playa del Rey portion of the project area are identified as follows: CA-LAN-63, CA-LAN-64, CA-LAN-65, CA-LAN-203, CA-LAN-204, and CA-LAN-206. These sites are summarized below in Table D-1. All five are situated in the eastern half of this portion of the project area, between Gulana Avenue on the west and Hastings Avenue on the east. This area is located on top of the bluff that overlooks the Ballona Creek drainage to the north. The locations of the 36 parcels, which are to be sold, have been compared with the mapped locations of these five sites currently known within the project area. None of the parcels occur within known boundaries of

the five archaeological sites. Thus, sale and subsequent development of these parcels will not pose an adverse impact on any of these known resources.

No archaeological sites have been recorded within the Marina del Rey/Venice portion of the project area. Prehistoric archaeological sites are not expected within the former Ballona Lagoon and wetlands, which were dredged and filled in 1965 to form the marina.

TABLE D-1
PREHISTORIC ARCHAEOLOGICAL SITES RECORDED WITHIN THE PLAYA DEL REY PORTION OF THE PROJECT AREA

SCCIC Designation	Initially Recorded	Site Type	Site Description
CA-LAN-63	06 / 05 / 50	Village Site	Ground stone artifacts; midden soils
CA-LAN-64	06 / 05 / 50	Habitation site	Ground and flaked stone artifacts and shell
CA-LAN-65	06 / 05 / 50	Habitation site	Ground and flaked stone artifacts and shell
CA-LAN-203	06 / 05 / 53	Seed processing site	Ground stone artifacts (metates)
CA-LAN-204	06 / 05 / 53	Not defined	None available
CA-LAN-206	06 / 05 / 53	Seed processing site	Ground stone artifacts (manos, metates, and cogstones)

SOURCE: Chambers, August 2000

SURVEY METHODS AND FINDINGS

The surface of each lot was examined for constituents of archaeological sites, such as artifacts, features or facilities, and/or culturally modified soil horizons. Due to the extensive built setting and landscape cover, visibility of the native surface was minimal to zero. No archaeological materials were identified during this survey.

Because the project is to be located within built environments, the utility of pedestrian archaeological survey methods is diminished due to the lack of native soil and topographic visibility. Moreover, much of Playa Del Rey and Marina Del Rey has been subjected to landfill, which has obscured the visibility of the native surface. Archaeological sites can consist of extensive subsurface components that would be difficult to localize without test excavations. Under such circumstances, construction monitoring by qualified archaeological monitors may be substituted for survey, evaluation/testing, or data recovery.

With respect to historic resources, the nature of the proposed project—that is, the sale of the lots themselves—would not directly or indirectly impact structures or properties. Consequently, no additional measures are required pertaining to built historical resources. Nevertheless, this does not preclude the existence of subsurface historical archaeology in the project area.

PALEONTOLOGIC RESOURCES

The top of the bluff comprising the Playa del Rey portion of the project area is underlain by late Quaternary dune sand (unit Qs), while the slope at the northern margin of the project area is underlain by the marine Palos Verdes Sand, which stratigraphically underlies the dune sand (Chambers, August 2000). The archives of the Natural History Museum of Los Angeles County Vertebrate Paleontology Section (LACMVP) indicate that no fossils have been reported from the dune sand anywhere within the USGS Venice 7.5' Quadrangle. Moreover, no vertebrate fossil site is reported as occurring in the dune sand (Chambers, August 2000). The lack of any previously recorded fossil site suggests that there is only a low potential for late Pleistocene fossil remains occurring in the project area where underlain by dune sand.

However, several previously recorded fossil sites do occur in the Palos Verdes Sand. These include LACMVP fossil site 1024 (Natural History Museum of Los Angeles County Invertebrate Paleontology Section fossil site 59) and others, which occur immediately east of the project area along the western side of Lincoln Avenue (Chambers, August 2000). These fossil sites yielded the fossilized remains of 300 species of late Pleistocene (Ice Age) shallow-water marine invertebrates, including snails and clams; the fossilized bones and teeth of marine vertebrate species, including fishes, sharks, seals, and porpoises; the fossilized bones of birds; and the fossilized bones of a land mammal species (gopher). These fossil occurrences indicate that there is a high potential for late Pleistocene fossil remains occurring along the northern margin of the Playa del Rey portion of the project area where underlain by the Palos Verdes Sand.

By contrast, little or no potential for such fossils is indicated by the geological character of the Marina del Rey/Venice portion of the project area, which is comprised of dune sand and fill materials dredged from Ballona Lagoon during construction of the marina.

HUMAN REMAINS

No human remains are known to exist on the SCG parcels.

HISTORICAL SIGNIFICANCE (AS DEFINED IN §15064.5)

No areas of historical significance are known to exist on the SCG parcels.

REGULATORY SETTING

FEDERAL

Federal legislation requires that federal agencies consider environmental effects to historical and cultural resources prior to authorizing any activity. The National Environmental Policy Act (NEPA) regulations and the National Historic Preservation Act of 1966 (NHPA) specify that environmental evaluations of proposed projects consider historic and cultural resource effects. This review process is referred to as Section 106 review. The Advisory Council on Historic Preservation (ACHP) is responsible for administering the Section 106 review process. The National Register of Historic Places (NRHP) provides

a method for preserving and maintaining cultural resources that meet certain eligibility criteria. In 1971, the President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources.

STATE

State legislation requires the protection of historical and cultural resources. In 1980, the Governor's Executive Order No. B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places."

California Environmental Quality Act Guidelines §15064.5 are used to determine the significance of impacts to archeological and historical resources. The guidelines state that a substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

The *Westchester-Playa del Rey Plan*, which is part of the *General Plan of the City of Los Angeles*, contains the following provision under Cultural Heritage Resources (City of Los Angeles, June 1974):

> Review potential resource impacts through the County and City's Environmental Guidelines and require appropriate environmental documentation and reasonable mitigation measures as determined by the Department of City Planning and the State Historic Preservation Office.

APPENDIX E

GEOLOGY AND SOILS BACKGROUND INFORMATION

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GEOLOGY AND SOILS BACKGROUND INFORMATION

ENVIRONMENTAL SETTING

INTRODUCTION

The project area lies within the western Los Angeles Basin, about 11 miles west-southwest of downtown Los Angeles and less than 1 mile from the Pacific Ocean. This area includes Marina del Rey (MDR), located between the Ballona Lagoon and Dockweiler State Beach on the Pacific Ocean, and Playa del Rey (PDR), located on a dissected coastal terrace approximately one mile inland from the shore at Playa del Rey. MDR is northwest of Ballona Creek and the Marina del Rey Harbor entrance and PDR is located to the south of Ballona Creek.

The geologic conditions overlying the Playa del Rey gas storage facility (PDRGSF) can affect conditions at the 36 proposed sale lot sites. The geologic and seismic setting of the proposed project could expose people and property to geologic hazards associated with the underlying geology and seismicity of this portion of Los Angeles. Particular to the proposed project is the affect that underlying geologic conditions have on controlling the upward migration of residual petroleum gases that are associated with the underlying oil reservoir and the PDRGSF. Mitigation would be required to detect and control any adverse gas migration or their affects on urban uses and activities.

GEOLOGIC SETTING

Surface geologic features include the Playa del Rey Bluff, a prominent topographic feature in the project area. It is about five miles south of the Santa Monica Mountains and about five miles north of Palo Verde Peninsula hills to the south. The Bluff is a westerly extension of the Baldwin Hills and Fox Hills, three miles to the east. The Bluff represents the southern flank of the ancestral of the Los Angeles River (now Ballona Creek) valley, which formerly flowed through this area (its current course is through Long Beach and San Pedro).

Geologically, the Los Angeles basin is a deep, sediment filled structural depression with recent sedimentary deposits overlying older sedimentary rocks. Beneath the sedimentary rocks are much older crystalline basement rocks, consisting of schists (shales that are altered by heat and pressure). Tectonic forces (those related to faults and earthquakes) beneath the earth uplifted, tilted, and folded the sedimentary rocks. These tectonic forces along both surface faults (e.g., the Newport-Inglewood and related faults) and buried (so-called “blind”) thrust faults (e.g., Torrance-Wilmington, Elysian Park-Puente Hills, Las Cienegas-Coyote Hills, Los Angeles Basin, and Compton-Los Alamitos) formed the chain of hills extending northwest-southeast from north of Los Angeles to the Long Beach.

Many subsurface geologic features within the Los Angeles Basin, such as folds and faults in the rocks, produced geological structures that trapped and accumulated oil and gas, resulting in numerous oil and gas fields. One of these fields is Playa del Rey Field, which underlies most of the proposed project area. Initially, it was the site for oil development, and then later gas storage in this western location of the Los Angeles metropolitan region. In the PDR project area, the Compton blind thrust fault is about 20,000 to 30,000 feet below the site, well below the gas storage zone. Faults can form potential direct or indirect pathways for subsurface oil or gas to move upward into shallower geological formations.

GEOLOGICAL UNITS

At the surface, younger alluvium (Qal) covers areas generally north of the Ballona escarpment (a cliff formed by erosion). South of the escarpment (bluffs), older sand dunes represent an old marine terrace (Qm/Qpu). Active sand dunes are present along the immediate coast. Other geologic units (formations) are not exposed at the surface.

Only the deeper bedrock formations contain the commercial oil or gas producing zones and the Southern California Gas (SCG) Gas Storage Zone. Thickness of these units varies widely across the PDR area. Average thickness reported below is representative of the overall area. The PDR project area includes the following geologic units (from youngest to oldest):

- Surface soils
- Younger alluvium (Qal; poorly to unconsolidated alluvial deposits), including the Ballona Aquifer (“50-Foot Gravel”)
- Active sand dunes (Qsr/Qs) along the coast
- Upper Pleistocene Older Sand Dunes (Qso or Qm/Qpu) and Lakewood Formation (Qlw)
- Lower Pleistocene San Pedro Formation (consolidated alluvium to indurated rock units)
- Tertiary (Pliocene and Miocene) bedrock formations (shales with some oil sands), including Pico and Repetto (Pliocene) Formations, along with Puente and Topanga Formations (Miocene)
- Mesozoic Schist (possibly Jurassic) metamorphosed shale; either of the Santa Monica or Catalina formation

Soils

The only semi-natural soils remaining in the area lie along the exposed undeveloped bluffs and adjacent lowlands between the Bluffs and Ballona Creek. Earthmoving associated with early development of the oil fields and subsequent roads and residential, commercial, and industrial developments have altered the natural soil profiles in the project area. In addition, major earth moving activities (dredging, channelizing, and filling) for Ballona Creek and MDR altered large areas not now designated as wetlands.

Due to the past disruption of natural soil profiles, most, if not all lots are not overlain by intact, native soil profiles. Natural soil profiles where observed along the Bluffs are less than two feet thick, consisting of a

clearly identifiable dark black A-horizon (probably clayey silt, clayey sand, and silty clay in composition) over a thin B-horizon overlying alluvial materials.

Recent Alluvium

The northern part of the PDR project is located in the MDR area. Recent alluvial and near-shore deposits associated with Ballona Creek underlie this area. Recent alluvium includes the Ballona Aquifer, also known as the "50-Foot Gravel," found north of the Ballona escarpment. Recent alluvium overlies the San Pedro Formation. Thickness of alluvium varies from several to about 60 feet. These deposits occur as poorly consolidated and have a moderate to high permeability.

Active Dune Sand

Active sand dunes parallel the coast from the Ballona Escarpment southward to Redondo Beach forming a narrow strip along the coast, 0.2 to 0.5 mile wide. These eolian deposits (deposited by wind), consisting of fine white poorly consolidated, permeable sand, are lenticular in shape, and overlie the older sand dune deposits. Thickness of the dune deposits reaches 70 feet.

Older Dune Sand

Most of the PDR project area is situated largely on the bluffs south of the Ballona escarpment. This elevated area is an ancient marine terrace (Qm/Qpu) covered by older dune sand sedimentary deposits. These sand dunes consist of sand, with silt, clay and gravel lenses. They overlie the Lakewood Formation and range in thickness from several feet to as much as 70 feet. In general, these deposits are poorly consolidated and have a moderate to high permeability.

Lakewood Formation

The Lakewood Formation underlies the Bluffs area. Due to erosion from Ballona Creek (ancestral Los Angeles River) the Lakewood Formation is not present north of the Ballona escarpment. The Lakewood Formation overlies the San Pedro Formation. In the Bluffs area, the Lakewood Formation is approximately 100 feet thick. Lakewood Formation deposits consist of sand, silt, and gravel and may include the Gage Aquifer in the project vicinity. Fine-grained sediments comprise from 40 to 80 percent of the total Lakewood Formation deposits (DWR, 1961).

San Pedro Formation

The San Pedro Formation overlies the Pico Formation in the project vicinity. This geologic unit is found at a depth of approximately 50 feet (MDR area) to 150 feet (Bluffs area) below the surface. It reaches a thickness ranging from about 100 to 150 feet (depth about 150 to 300 feet to top of the Pico Formation).

The San Pedro Formation consists of well-graded sand with gravel interbeds, along with some beds containing fine gravel, sand, and silt. These sands and gravel contain varying amounts of silt and clay. In the project area, the Silverado Aquifer forms the base of the San Pedro Formation.

Bedrock – Pico Formation

The Pico Formation occurs at a depth of about 400 to 500 feet below the surface and is not exposed at the surface within the project vicinity. In the project area, it consists of over 2,000 feet of marine sandstone, siltstone and shale, interbedded with marine gravels (DWR, 1961). Pico Formation shale units form impervious caps or barriers to upward movement of water, oil, and gas, trapping the hydrocarbon deposits within underlying more porous and permeable sandstone beds. High-pressure gas zones encountered during drilling through this sequence of geologic beds are very dense and consolidated.

Bedrock – Repetto Formation

The Repetto Formation is approximately 3,000 feet below the surface and not exposed at the surface within the project vicinity. In the project area, it consists of over 2,000 feet of siltstone and shale, interbedded with layers of sandstone and conglomerate. Sandstone beds within the upper and middle Repetto Formation form the oil productive upper zone found in the MDR (Venice) area. The amount of shale increases with depth. Shale intervals form caps or seals to these productive zones, as well as secondary seals for the deeper gas storage zone.

Bedrock – Puente Formation

The top of the Puente Formation is generally over 5,000 ft deep. It is about 800 feet thick and forms the primary cap rock to the oil producing and gas storage zone. The base of this 7 million year old formation, known as the Nodular Shale, overlies the older oil and gas-producing zone and gas storage zone.

The mostly deep marine formation consists of black to dark gray, and dark brown shale. This clay-rich formation is devoid of any major sand-bearing units (Davis, 2000). Some thin sand lenses and pockets are present in the shale. The thick shale interval is impermeable and forms the primary cap or seal for the PDR oil field and the gas storage zone. Caprock material is composed of hard to medium hard, massive to platy shale.

Bedrock – Topanga Formation

The Schist Conglomerate is part of the Topanga Formation (Davis, 2000). This is the primary reservoir for the PDR oil field and the gas storage zone at a depth of about 6,000 feet. The Topanga Formation is sandstone and conglomerate of terrestrial origin, overlying the Catalina Schist basement complex. Since the Schist Conglomerate was deposited in low areas atop the eroded basement rock, is does not underlie the entire project area.

Basement Rock – Santa Monica or Catalina Schist

Santa Monica Schist or Catalina Schist are names applied to basement rock underlying the project area and most of the Los Angeles Basin. In the project area, basement occurs at depths greater than 6,000 feet. The overlying Topanga Formation deposited on the schist is an irregular erosional surface.

STRUCTURE AND SEISMICITY

Compression between the North American and Pacific plates creates tectonic forces that shape many of the surface features we see today. When forces along the plate boundary increase to the point of failure, earthquakes occur and often times, the displacement experienced deep in the earth where the failure occurs translates at the surface as surface fault rupture. Several active and potentially active faults are located within the project vicinity. Regional tectonic stresses also uplifted, tilted, and folded sedimentary rock units in the project area, creating hills and related geologic structures. A chain of hills formed by these tectonic forces extends from north of Los Angeles, southeast to the Santa Ana River. Geologic structures underlying many hills are often elongated domes or anticlines, similar to those underlying Fox Hills and Baldwin Hills.

Folding

In the PDR project area, the thick sedimentary sequence of sedimentary rock layers is gently folded into a broad anticline (elongated dome or convex upward folded geologic structure). Some minor faults may be associated with this structure (Davis, 2000). Along with stratigraphic (depositional) confinement, the anticline forms a structural trap for oil and gas accumulation within the PDR oil field.

Faulting

Faults are fractures or lines of weakness in the earth's crust. Faults that allow landmasses to move horizontally past each other are strike-slip faults (e.g. San Andreas, San Jacinto, Elsinore, and Newport-Inglewood). In contrast, vertical movement occurs along normal, reverse and thrust faults. Buried low angle thrust faults that do not rupture the surface are known as blind thrusts, for example the Elysian Park Thrust Fault (also known as the Elysian Park Fold and Thrust Fault, the Elysian Park blind thrust fault) and Torrance-Wilmington Fold and Thrust Belt. Faults exhibiting both vertical and horizontal movement are oblique faults (e.g. Santa Monica-Hollywood, Cucamonga, Palos Verdes, and Raymond Faults and Fault Zones). Major fault zones in Southern California within approximately 50 miles of the site are summarized in Table E-1. Other faults defined within a 5 mile radius of the site include the northwesterly-trending Newport-Inglewood, Palos Verdes, Overland Avenue, and Charnock faults. Within the PDRGSF area and the Storage Zone Area of Influence (within one mile of the Main Facility), two sets of minor faults extend through in the following units:

- Catalina Schist and Schist Conglomerate, southeast corner of Section 27, T2S R15W, at depths greater than 4,000 ft below ground surface,
- Catalina Schist and Schist Conglomerate, northwest corner of Section 27, T2S R15W, at depths greater than 4,000 ft below ground surface.

The Charnock fault, the nearest documented fault in the project vicinity, is located about 1.5 miles east of the proposed project area, near the San Diego Freeway (Interstate 405). It extends southeast from near Venice Boulevard toward the City of Gardena (DWR, 1961). This fault is vertical, trending approximately N35W, with the northeast side downthrown relative to the southwest side. The documented length of this fault is about six miles (10 kilometers). The Charnock fault displaces lower aquifers and acts as a partial barrier to groundwater movement (DWR, 1961). It is classified as a

TABLE E-1
DETERMINISTIC EARTHQUAKE SITE PARAMETERS

Abbreviated Fault Name	Approximate Distance Miles (Kilometers)	Estimated Maximum Earthquake: Maximum Earthquake Magnitude (Mw)	Estimated Maximum Earthquake: Mean Values: Peak Ground Acceleration (g.)	Estimated Maximum Earthquake: Mean Values: Estimated Site Intensity [a]
Palos Verdes	4.1 (6.6)	7.1	0.424	X
Newport-Inglewood (L. A. Basin)	5.9 (9.5)	6.9	0.340	IX
Compton Thrust	6.2 (9.9)	6.8	0.591	X
Santa Monica	6.3 (10.2)	6.6	0.362	IX
Malibu Coast	7.2 (11.6)	6.7	0.346	IX
Hollywood	8.6 (13.8)	6.4	0.272	IX
Elysian Park Thrust	14.1 (22.7)	6.7	0.307	IX
Anacapa-Dume	14.8 (23.8)	7.3	0.260	IX
Raymond	16.6 (26.7)	6.5	0.156	VIII
Verdugo	18.0 (28.9)	6.7	0.161	VIII
Northridge (E. Oak Ridge)	18.0 (29.0)	6.9	0.270	IX
Sierra Madre	21.4 (34.5)	7.0	0.160	VIII
Sierra Madre (San Fernando)	22.6 (36.4)	6.7	0.126	VIII
Whittier	24.1 (38.8)	6.8	0.102	VII
Santa Susana	24.2 (39.0)	6.6	0.109	VII
San Gabriel	26.2 (42.2)	7.0	0.106	VII
Clamshell-Sawpit	29.2 (47.0)	6.5	0.080	VII
Holser	30.2 (48.6)	6.5	0.077	VII
Simi-Santa Rosa	30.7 (49.4)	6.7	0.087	VII
San Jose	32.3 (52.0)	6.5	0.070	VI
Oak Ridge (Onshore)	32.4 (52.2)	6.9	0.095	VII
Chino-Central Ave. (Elsinore)	37.3 (60.1)	6.7	0.068	VI
San Cayetano	37.7 (60.7)	6.8	0.073	VII
Newport-Inglewood (Offshore)	39.5 (63.5)	6.9	0.061	VI
Cucamonga	41.9 (67.5)	7.0	0.075	VII
San Andreas – 1857 Rupture	44.8 (72.1)	7.8	0.101	VII
San Andreas – Mojave	44.8 (72.1)	7.1	0.061	VI
Oak Ridge (Blind Thrust Offshore)	46.1 (74.2)	6.9	0.092	VII
Elsinore-Glen Ivy	46.5 (74.8)	6.8	0.045	VI
Channel Islands Thrust (Eastern)	47.6 (76.6)	7.4	0.131	VIII
Ventura – Pitas Point	48.2 (77.6)	6.8	0.053	VI

[a] Modified Mercalli Intensity

SOURCE: EQFAULT Computer Program (Blake, 2000)

potentially active fault by both the Los Angeles County Seismic Element (1990, Plate 1) and the state fault map (Jennings, 1995).

Historic Seismicity

During the past 230 years (1769 to 1999), Southern California experienced about 20 notable earthquakes (Mw 6.0 or greater; where Mw is the moment magnitude). Six of these events equaled or exceeded M7.0. The three largest earthquakes that occurred within the Los Angeles Basin during recent time are the January 17, 1994, Mw 6.7 Northridge earthquake; the October 1, 1987, Mw 5.9 Whittier-Narrows earthquake; and the February 9, 1971, Mw 6.4 San Fernando earthquake. The shortest distance from the site to the energy release zone (site-to-source distance) in these earthquakes is about 18, 22 and 31 miles, respectively.

On 16 June 1920, a magnitude 5.0 earthquake occurred west of Inglewood. The origin of this event was the Newport-Inglewood fault, approximately 13 miles to the east. On 10 March 1933, the 6.3 magnitude Long Beach earthquake occurred about 36 miles to the south near Huntington Beach. Local faults, such as the Charnock and Overland Avenue, could be sources for aftershocks, but would be less likely to generate unique earthquakes than the Newport-Inglewood or Compton blind thrust.

Peak horizontal ground acceleration (PHGA) estimates indicate that the earthquake-induced ground motion would be generated by a Mw 6.9 event on the underlying Compton Thrust fault or an Mw 7+ event on the Newport-Inglewood fault. The California Geological Survey (CGS) prepared the state-planning scenario for a major earthquake on the Newport-Inglewood fault zone assumes a magnitude 7 earthquake that could subject the project area to seismic intensity (Modified Mercalli Intensity) of 8+ to 9 (VIII+ to IX) (Toppozada, et al, 1988). In 1933, the project site area experienced an intensity of VII+ during the 6.3 magnitude Long Beach earthquake. Even though no specific analysis has been conducted to determine actual values, a future earthquake on the buried thrust located directed under the site area may generate higher ground motion intensity than experienced during the 1933 event.

GEOLOGIC AND SEISMIC HAZARDS

Fault Rupture

Surface fault rupture can occur in cases where earthquakes are large or hypocenters location of actual fault failure are shallow. The California Geological Survey (CGS) defines “active” faults as those offsetting materials less than 10,000 to 12,000 years old or exhibiting significant seismic activity. “Potentially active” faults are those offsetting strata within the last 1.6 million years ago. With the exception of the low angle Elysian Park Thrust Fault, which lies at least 5 kilometers deep (8,000 to 10,000 feet beneath the storage zone), no known active faults underlie the Project area and the Storage Zone. Because surface fault rupture is more likely on active faults, the State of California, through Alquist-Priolo Earthquake Zoning Fault Act, places active faults in zones that restrict development. No Alquist-Priolo zones traverse the proposed project area and the potential for surface fault rupture at the site is considered very low.

Presently, documentation indicates that the storage zone contains no fault offsets although mapping has inferred two potential fault offsets in Section 27, T2S, R15W. Old reports infer various faults in other areas of the field, but these reports do not provide evidence of their presence. With the exception of the possible faults in Section 27, recent geologic reviews (Davis, 2000) did not provide evidence for the other faults inferred by various reports. The possible faults in Section 27 are not considered active or potentially active. Based on the age of rock formations that may be offset by these faults in Section 27, (Davis, 2000) indicates that they are confined to depths greater than 4,000 feet. Davis (2000) also states that the fault has not displaced in the last 14 million years, and certainly not in the last 3 to 4 million years. A major, near vicinity earthquake could possibly cause minor movement (probably < 1.0ft) at depth within the storage zone, but such offset is unlikely to propagate to within several hundred feet of the surface.

Post-1933 earthquakes within the Newport-Inglewood zone reportedly have damaged wells and well casings (Toppozada et al, 1988). The 21 October 1941, M 4.9 earthquake damaged wells at a depth of 5,000 to 6,000 feet in the West Dominguez oil field. On 18 June 1944, two smaller earthquakes in the Dominguez Hills reportedly damaged oil wells at depths of 3,000 to 6,000 feet. A small earthquake (M 2.7) apparently sheared oil well casing at 1,550 feet on 14 December 1947. Similar, though less significant, damages occurred due to low magnitude events in 1949, 1951, and 1955. Deep compaction of substrata in the Wilmington field may have caused these latter four occurrences.

Earthquake Ground Shaking

Estimated peak horizontal ground acceleration (PHGA) generated by earthquakes on the San Andreas Fault, Newport-Inglewood, and Elysian Park Thrust Fault should range from about 0.1 g to 0.7g. These earthquakes would generate enough energy and spectral content, and have a sufficiently long duration, to damage project facilities, adjacent structures, and area residences.

Induced Seismicity

Microseismic activity, with magnitude –1.0 to 1.0 Mw, often occurs during injection and extraction operations (Terralog Technologies, 2000). Activity of this magnitude can be anticipated at PDR during operations, and is not significant relative to natural daily seismicity in the Los Angeles area. Earthquakes in this magnitude range would not cause subsurface fault movement of more than an inch and would not be felt at the surface.

Slope Stability

The MDR area is along the coastline north of the Bluffs. No slope stability problems are expected in this area since it is nearly flat. Five lots in the PDR area have steep slope angles, with slope heights of more than 50 feet in Quaternary marine terrace deposits. Although these slopes could fail under static or seismically-induced movement, there is little potential for slope stability problems due to the distances of the lots from the slopes and the massive nature of the deposits. Any unstable slopes that may be present locally could experience problems with or without proposed project construction.

Subsidence

Removal of oil and gas (or other fluids) from poorly consolidated geologic formations can cause surface subsidence. These fluid withdrawal processes can leave void spaces at depth. Unless refilled with fluids by re-pressurization techniques, poorly consolidated sediments may collapse causing subsidence in the shallower earth layers. The same general process can occur when groundwater is withdrawn from unconsolidated aquifers. There is no indication that groundwater withdrawal is taking place in the proposed project area, therefore the potential for subsidence is low.

In October 2000, the City of Los Angeles, Department of Public Works (LADPW) evaluated surface elevation changes in the Playa Vista project area (City of Los Angeles, 2001). During the period from 1975 to 2000, the maximum surface subsidence observed on one location was 2.66 inches. This occurred at an elevation marker placed in the curb of Manchester Boulevard at the intersection of Hastings Avenue. LA DPW concluded that area surface subsidence identified during their evaluation was probably associated with settlement of curbs, sidewalks and gutters along major streets.

Although the oil storage zone is well-consolidated, complete withdrawal of all storage gas (including cushion gas) may cause minor surface subsidence. No specific studies for the PDR field indicate this level of subsidence. For the Montebello Field (with somewhat similar geology) studies estimate two inches of subsidence distributed over a broad area (Terralog Technologies, 2000). Since the field will remain in operation, measurable surface subsidence is not anticipated. Due to the minor amounts of subsidence, the potential damage to surface structures is low.

Liquefaction and Other Secondary Earthquake Effects

Seismic hazard zone maps outline areas that are considered susceptible to liquefaction and earthquake-induced landslides. Liquefaction susceptible areas are mapped within the MDR project area, but not within the PDR project area. Limited slope areas along the north bluffs of PDR are classified as potential landslide hazards but these areas do not impact planned sale lots.

REGULATORY SETTING

This section presents a discussion of regulations that address geologic hazards in California, applicable to the project site. In addition, with a long history of oil production in southern California, dating back to the late 1800s and early 1900s, the need existed for regulations to protect people and the environment from various potential impacts associated with oil and gas operations. Today, operators must comply with numerous safety and environmental laws, regulations and guidelines. Thus, the oil and gas industry, including the SCG gas storage facilities, is highly regulated. Government agencies and regulation issues relevant to this project are discussed below.

SEISMIC HAZARDS MAPPING ACT

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities,

counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. The project site is located within a seismic hazard zone for landslides, as designated by the CGS.

CALIFORNIA DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

The California Division of Oil, Gas and Geothermal Resources (DOGGR) regulates production of oil and gas, as well as geothermal resources, within the state of California. DOGGR regulations define well design and construction standards, surface production equipment and pipeline requirements, and well abandonment procedures and guidelines.

(1) DOGGR regulates well abandonment procedures to ensure they are conducted safely and are effective. These regulations require procedures designed to prevent future migration of oil and gas from a producing zone to shallower zones, and to protect groundwater.

(2) DOGGR oversees operations. When an operator ceases well operation or production, state law requires the well is abandoned within a reasonable period of time.

(3) Regulations require operators to maintain detailed records of abandonment operations and file copies with DOGGR

(4) DOGGR also regulates environmentally sensitive pipelines within 300 feet of any public recreational area, or a building intended for human occupancy (residences, schools, hospitals, and businesses) that is not necessary to the production operation

DOGGR regulations are defined in the California Code of Regulations (CCR), Title 14, Chapter 4.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CAL EPA), DEPARTMENT OF TOXIC SUBSTANCE CONTROL (DTSC)

The California Department of Toxic Substance Control (DTSC) oversees the identification, cleanup and removal of hazardous or potentially hazardous materials that may be present on project parcels. DTSC oversight would include remediation of hazardous or potentially hazardous soil contamination caused by past oil field activities. Crude oil is exempt by DTSC, and therefore, is not regulated as a hazardous substance.

COUNTY OF LOS ANGELES, DEPARTMENT OF PUBLIC WORKS

For projects involving site grading and earthmoving, the County of Los Angeles, Department of Public Works (DPW), Building and Safety Division, has jurisdiction to ensure the safety of workers during construction and the public once the project is constructed. DPW, City of Los Angeles grading and earthmoving requirements are specified in the County Building Code (including the latest version of the Uniform Building Code) and the procedures outlined in the County Hydrology Manual.

CITY OF LOS ANGELES

The City of Los Angeles, Building and Safety Department, regulates design and construction of commercial and high occupancy structures located over areas with potential for gas reaching the surface. These areas typically include oil and gas resource areas (active and abandoned oil and gas fields), landfills and other areas where shallow subsurface gas has been documented.

The City of Los Angeles Fire Department prohibits construction of dwellings closer than 50 feet from an oil well. The Fire Commission may grant variances not exceeding 10 percent of the required clearances. Any substantial reduction in clearances should impose additional safeguards from fire and exposure to fire. Upon completion of well abandonment procedures, the Los Angeles Fire Department conducts a final inspection of the well site.

Along with the DPW, the City will issue permits for project related grading activities within the city, monitor project related construction activities if applicable, and ensure compliance with permit requirements. The City will issue final project approvals and a certificate of occupancy (if applicable) when they receive verification of compliance to inspections and requirements.

REPORTED ABANDONMENT PROCEDURES: DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

The Division of Oil, Gas and Geothermal Resources (DOGGR) maintains well records and oversees well abandonment procedures. DOGGR (2001) provided information from their records for the wells listed in Table F-1. This information from DOGGR is presented in the following paragraphs.

- Well Number: 29-1 - Well plugged on 5/12/41 by Del Rey Realty Company. Reentered well on 5/21/56 by Southern Cal Gas Co. During reentry, well blew out through 7” @ 713’. 7” eventually cut @ 732’ and relanded new 7” from 732’ to surface. Pressure tested good with 1400 psi for 15 min. Well plugged on 8/4/94. No record of gas test.

- Well Number: Big Ben No. 1 - No mention in DOGGR record of casing repair @ 150 feet nor surface seep during 1991. Well plugged on 10/26/92. Gas test on 3/27/95 - OK.

- Well Number: Blackline No. 1 - Well was plugged on 3/4/37 by Black Line Oil Co. Reentered well on 1/31/57 by Southern Cal Gas Co. During reentry, located hole in 6 5/8” casing below 968’. Also, indication of leaking 4 3/4” casing downhole. The 6 5/8” casing cut and pulled from 1058’. Relanded new 6 5/8” casing from 1058’ to surface. Opened port collar and cemented. Top of cement estimated at 452’. Pressure tested with 2500 psi for 20 minutes - OK. On 12/22/81, notice to repair leak @ 1058’ and holes @ 1065’. Perforated 4 holes @ 1065’ and squeeze with cement. Tested to 600 psi for 30 minutes - OK.

- Well Number: SoCal No. 4 - On 12/9/75, located holes in 8 5/8” casing between 3258’ - 3396’. Bad casing interval cemented across. Pressure tested to 1000 psi for 20 minutes - OK. On 4/5/78, located holes in 8 5/8” casing between 3298’ - 3319’ and 2095’ - 2122’. Both bad spots cemented and pressure tested - OK.

- Well Number: SoCal No. 3 - Only evidence of problem was recorded on 3/16/87, when after running routine inspection and casing log, the tree didn’t hold pressure. “O” ring seals were replaced and everything OK.

- Well Number: 12-1 - On 10/22/75, located leak in 6 5/8" @ 175'. Cut and pull 6 5/8" casing from 481'. Ran 9 5/8" casing to 513' and cemented thru ports at 475 to surface. The 6 5/8" casing was relanded at 481' and pressure tested to 2000 psi for 20 minutes - OK.

- Well Number: 24-2 - On 4/30/75, well reported leaking from cellar thru 7". Found upper portion of 7" corroded. Cut and pulled 7" casing from 172'. Replaced with additional 7" to 172' and pressure tested to 2000 psi for 15 minutes - OK.

- Pomoc No. 1 - Notice to investigate casing and repair leak at 2830'. During inspection, upper part of 7" casing found to be tight. Cut and pulled from 657'. Did not find any holes. Replaced with new 7" casing to 657' and pressure tested to 3000 psi for 20 minutes. Ran casing patch from 2815' to 2845' and pressure tested to 2000 psi for 20 minutes - OK.

- Joyce No. 1 - Well plugged on 3/15/93. No gas test. No recorded leaks.

- Lo Mar No. 1 - Well plugged on 7/14/36 by Lor Mar Development Co. At time of plugged, well had bad 13 3/8" casing @ 572'. Reentered well on 3/15/56 by Southern Cal Gas Co. Cut and pulled 6 5/8" casing from 716'. Replaced with new 6 /58" casing and cemented through ports at 706' to surface, between 13 3/8" and 6 5/8" casings. Top job was required to bring cement to surface. Well plugged on 12/1/92. No gas test.

APPENDIX F

HAZARDS AND HAZARDOUS MATERIALS BACKGROUND INFORMATION

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HAZARDS AND HAZARDOUS MATERIALS BACKGROUND INFORMATION

ENVIRONMENTAL SETTING

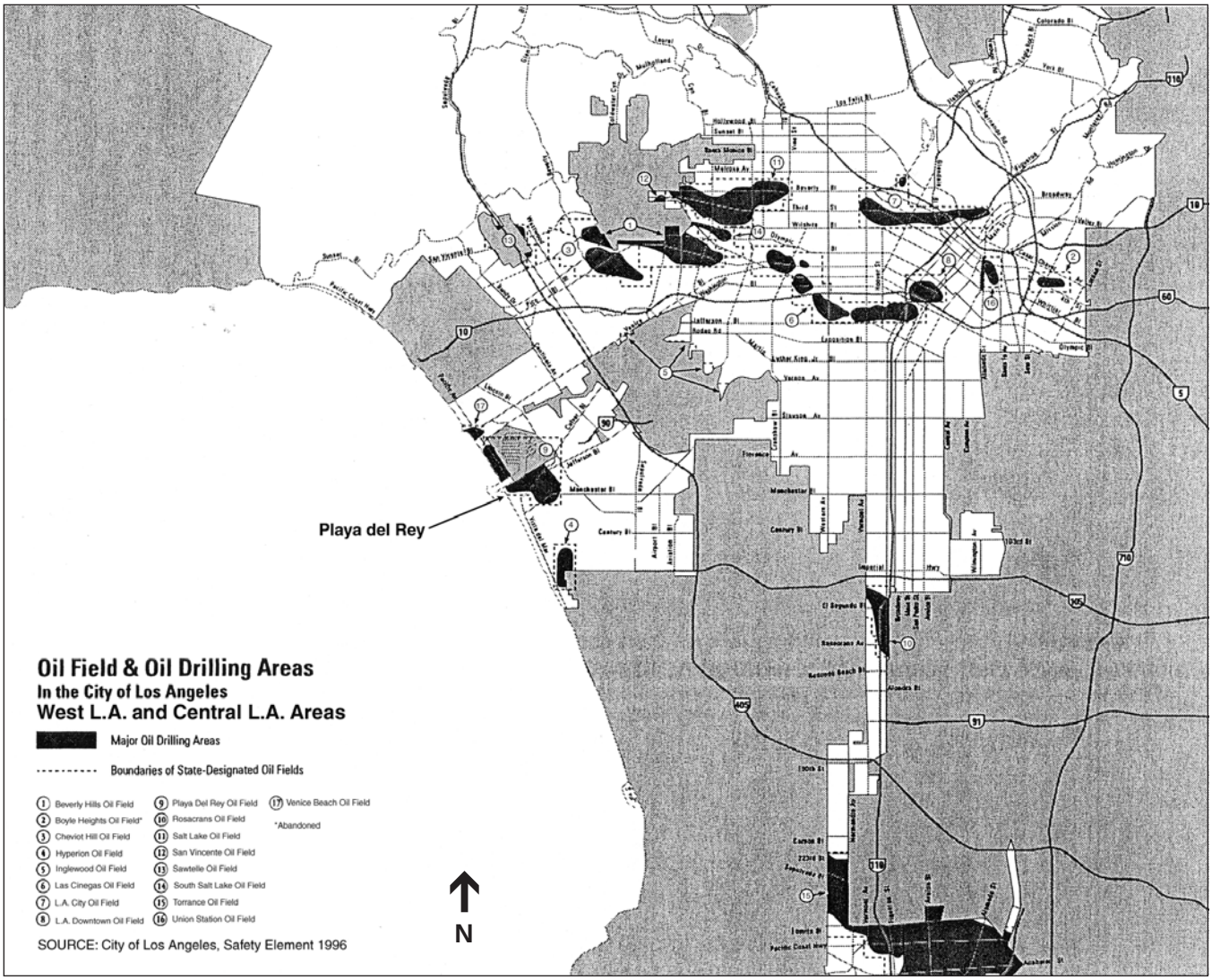
As discussed in Section VII, Geology and Soils, the project area overlies a region of oil fields as shown on Figure F-1. In the early twentieth century oil was extracted from this region and in 1942, the Southern California Gas Company (SCG) converted the depleted Playa del Rey oil field into a natural gas storage reservoir; one of five gas storage facilities operated and maintained by SCG in the Los Angeles region, within a 40 mile radius of the project area. These facilities are capable of meeting all current and anticipated SCG future needs for the Los Angeles region. Therefore, the regional value of gas storage has declined in accordance with increasing available supply of storage and available transmission capacity to serve the regional demands.

There are no designated quarry areas either on the project lots or in the vicinity of the project lots.

REGULATORY SETTING

The current regulatory framework relevant to hazards and human health encompasses process risk related to the use of hazardous materials and management of risks from hazardous materials that have been released to the environment. With respect to chemical hazards, the use, storage, and disposal of hazardous materials and wastes are regulated through a network of overlapping federal, state, and local laws and regulations. Various government agencies are responsible for implementing these laws and enforcing their requirements.

Federal and state laws require planning to ensure that hazardous materials are properly used, stored, and disposed of, and in the event that such materials are accidentally released, to prevent or to reduce injuries to human health, safety, or the environment. Businesses must store hazardous materials appropriately and train employees to manage them safely. Hazardous waste laws impose cradle-to-grave liability, requiring generators of hazardous wastes to handle them in a manner that protects human health and the environment to the extent possible. Both federal and state laws have established programs to identify hazardous waste sites, to require site remediation, and to recover the costs of site remediation from polluters. The following discussion briefly summarizes regulations that must be complied with regardless of ownership of the generating station.



SOURCE: City of Los Angeles, Safety Element 1996

Figure F-1

Oil Fields in the West and Central Los Angeles Areas

FEDERAL

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)

Commonly known as Superfund, this federal law defines reportable quantities for spilled materials and the process for investigation and cleanup of contaminated sites The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) also establishes a National Priorities List and outlines a liability and response mechanism for releases of oil and hazardous materials.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986

This law establishes public reporting of the use of certain chemicals under Title III, also known as the Emergency Planning and Community Right-to-Know Act. In California, some of the provisions of the Superfund Amendments and Reauthorization Act (SARA) Title III are implemented locally by the city or county health department through the Business Plan and hazardous material inventory requirements.

CLEAN WATER ACT (CWA)

The CWA sets up the framework through which permits to discharge waste to surface waters are authorized. The National Pollutant Discharge Elimination System (NPDES) permit typically has conditions specific to the permitted operation and may set limits on acidity (pH), chemical concentrations, oil and grease, dissolved and suspended solids, and temperature of the discharge. The CWA also prohibits the discharge of pollutants to storm water.

OIL POLLUTION ACT OF 1990 (OPA)

The Oil Pollution Act (OPA) regulations supplement existing laws regarding the storage and handling of oil. As defined in OPA, Spill Prevention Countermeasure and Control (SPCC) Plans are required for facilities storing bulk oil. OPA also added requirements for facilities presenting a threat to navigable waters, including preparation of an Facility Response Plan (FRP) that prepares a facility for response to potential worst-case spills. OPA includes employee training requirements related to prevention of, and responses to releases.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

The Occupational Safety and Health Administration (OSHA) regulations contained in Title 29 and the Cal-OSHA regulations codified in Title 8 contain employee safety provisions that attempt to minimize the hazards for employees in the workplace.

TOXIC SUBSTANCES CONTROL ACT (TSCA)

The Toxic Substances Control Act (TSCA) includes requirements for the storage, use, and disposal of Polychlorinated Biphenyls (PCB)-containing materials.

DEPARTMENT OF TRANSPORTATION (DOT)

Physical hazards, storage field maintenance and operations defined by the Department of Oil Gas and Geothermal Resources (DOGGR) are under the federal jurisdiction of the Department of Transportation (DOT). The DOT regulates the transportation of hazardous materials between states. Both federal and state agencies specify driver training requirements, load labeling procedures, and container specifications. The DOT also indirectly regulates the transportation of natural gas through pipelines according to the Natural Gas Pipeline Safety Act. The Act requirements, including designing pipelines to maximize safety (e.g., installing corrosion protection), routinely inspecting pipelines, preparing for possible emergencies, and reporting injuries and physical damage caused by accident, have been adopted by the California Public Utilities Commission (CPUC).

STATE

Title 22 of the California Code of Regulations defines, categorizes, and lists hazardous materials and wastes. Title 22 defines a hazardous material as:

> "a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present of potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed."

Hazardous wastes are categorized in Title 22 as either hazardous wastes, as defined in the Resource Conservation and Recovery Act (RCRA) or non-RCRA hazardous wastes. Title 22 lists chemical compounds that are presumed to make a material or waste hazardous to the environment.

CALIFORNIA WATER CODE (CWC)

The California Water Code (CWC) includes provisions of the federal CWA and water quality programs specific to California. The CWC requires reporting, investigation, and cleanup of hazardous material releases that could affect waters of the state (including storm waters).

CALIFORNIA ABOVEGROUND PETROLEUM STORAGE ACT

The California Aboveground Petroleum Storage Act, which is implemented by the Regional Water Quality Control Boards (RWQCBs), regulates the storage of petroleum in aboveground storage tanks (ASTs) and requires construction methods and monitoring to prevent petroleum releases.

CALIFORNIA HEALTH AND SAFETY CODE SECTION 25534 (CAH&SC)

Section 25534 of the California Health and Safety Code (CAH&SC) requires businesses that handle amounts of Acutely Hazardous Materials (AHMs) in excess of certain quantities to develop a Risk Management Plan (RMP). The RMP encompasses process hazards, potential consequences of releases, and documentation, auditing, and training relative to the AHMs that are above specified threshold

quantities at the generating station. Regulated AHMs may include aqueous ammonia and sulfuric acid, as well as other acutely hazardous substances.

CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES (DOGGR) AND CPUC

Physical hazards, storage field maintenance and operations within the Playa del Rey gas storage facility are under the jurisdiction of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) and the California Public Utilities Commission (CPUC). DOGGR regulates the operations and maintenance of natural gas storage fields, and certain aboveground piping is regulated by the CPUC. DOGGR manages oil and gas resources in California and for the Playa del Rey field. The City of Los Angeles has local responsibility and authority through land use permitting and zoning for both oil and gas production and quarry and mining operations. The City also has zoning jurisdiction through special use permits and overlays for oil and gas. Currently, SCG holds use permits and lands are currently zoned for residential (35 of the 36 lots) and commercial (1 of the 36 lots).Playa del Rey Gas Storage Facility (PDRGSF)

The Storage Field is regulated by a number of state and local agencies. The DOGGR has primary jurisdiction over gas storage operations. The storage field operates pursuant to a permit issued by DOGGR, which requires, among many other things, extensive reporting, inspections, and performance reviews. Oil production has been exercised in the Los Angeles area for over seventy years. Gas production has been exercised for over sixty years. Federal and state regulations have been established to manage current and abandoned operations. There are significant numbers of abandoned oil and gas wells throughout the Los Angeles basin. Several of these abandoned wells have buildings constructed over or adjacent to them, and their proximity may be concern for the potential for exposure to hazards if there is gas leakage from abandoned wells. The Playa del Rey Gas Storage Facility (PDRGSF) is the only operating gas storage facility left in the Los Angeles Basin.

A DOGGR Project Approval Letter defines requirements that are specific to the Playa del Rey storage field (1986). Environmental conditions and well safety equipment are inspected regularly. During these inspections, a DOGGR inspector looks for indications of any type of oil or gas leaks from wells, pipelines, pressure vessels, and tanks. They also witness testing of the automatic shut down equipment on each well. Storage project performance reviews take place annually. During these reviews, DOGGR engineers examine SCG records to ensure that all well and reservoir monitoring and leak survey requirements were met.

Storage Tanks

Hazardous materials are typically stored in underground or aboveground storage tanks. Laws and regulations regarding underground storage tanks that are used to store hazardous materials (including petroleum products) require that owners and operators register, install, monitor, and remove their tanks according to established standards and procedures. Releases are to be reported. Owners of above-ground storage tanks containing petroleum products are required to prepare and implement spill prevention and response strategies, and to contribute to the Environmental Protection Trust Fund that is used to respond

to some spills. Proper drainage, dikes, and walls are required in order to prevent accidental discharges from endangering employees, facilities, or the environment.

Well Abandonment Regulations and Policies

DOGGR has adopted regulations[13] for well abandonment to ensure that it is done safely and effectively. These regulations provide well abandonment procedures that prevent future migration of oil or gas from the producing zone and the upper zones, as well as protect groundwater. Furthermore, the DOGGR is charged with ensuring that public safety is not endangered. The DOGGR has the expertise and the authority to require whatever steps are deemed necessary to protect public safety, up to and including requiring SCG to cease operations and/or remove all gas from the field. They have approved SCG operations and monitoring program. As stated above, well abandonment is discussed in more detail within the geology section of this document.

After subsurface abandonment is completed and the surface portions of the well are removed, SCG must test and remove soil that has been contaminated by oil or other well maintenance substances. At the end of abandonment operations, the DOGGR and the Los Angeles Fire Department will complete a final inspection of the well site. After this inspection, the DOGGR will review all of the abandonment records of the operator and will either provide a final abandonment approval or a notice of deficiency that must be corrected.

Regulations Regarding Construction of Buildings Over Abandoned Wells

Future development of the lots would be subject to the requirements of local permitting agencies and would include compliance with all requirements for construction over abandoned wells. The regulatory requirements for building over abandoned wells are discussed in the Geology Section of this document (Section VII).

Other local agencies that have jurisdiction over the PDRGSF facilities or operations include the Los Angeles Fire Department, the South Coast Air Quality Management District, the Los Angeles County Sanitation District, and the Occupational Safety and Health Administration.

GAS MIGRATION

Well Drilling in the Playa del Rey Oil Field and Natural Gas Storage Field

Drilling in the region began as early as 1921 (Davis, 2000b). Early holes drilled and abandoned in the area during 1925 and 1926 were not deep enough to reach the producing zones in the Schist Conglomerate. The discovery well for the Playa del Rey (PDR) oil field was completed in 1929. Primary field development continued through the mid-1930s. By the early 1940s production had reached its economic limit and operators abandoned oil production from the field.

In 1942, as part of the national war effort, the federal government condemned and took possession of approximately 240 acres of the PDR field area to use as a natural gas storage field. This gas storage field

[13] These regulations can be found in California Code of Regulations, Title 14, Chapter 4.

was later transferred to the Reconstruction Finance Corporation in 1945. Then, in 1953, the Reconstruction Finance Corporation declared the field surplus and offered it for sale in 1953. The Southern California Gas Company was the successful bidder and assumed operations in late 1953.

Facilities were completed in 1956, and then gas was injected and stored at depths of about 6,200 feet within the Conglomerate Trap Zone. By July 1958, approximately 27 billion cubic feet (bcf) of cushion gas was stored. Since that time, numerous wells have been utilized for storage and retrieval of the gas. Currently, the storage field is operated through 54 wells directionally drilled from the lowlands and hilltop of PDR. Of these 54 wells, 25 are injection/withdrawal wells used to inject and extract gas, 8 are liquid (primarily water) removal wells, 3 are lateral migration wells to control gas movement, and 18 are observation wells used to monitor pressure and liquid saturation. SCG's facility for the PDRGSF is 0.2 mile north of Manchester Avenue.

Types of Gases

The three types of gas that may exist within the geological and soil units underlying the project area are processed natural gas (or piped gas), biogenic (or swamp) gas, and thermogenic (field) gas. Biogenic gas is primarily methane with carbon dioxide and sulfide gases resulting from decomposition of organic material in former lagoon deposits or other sources. Thermogenic gas is generated at depth, when increased temperatures and pressures alter organic material. It includes a broad range of gas components (methane, propane, butane, ethane, etc.). In contrast, processed natural gas is primarily methane remaining from thermogenic gas after most of the heavier gas components are removed (usually less than 0.1% heavy thermogenic hydrocarbons). These gas types exhibit distinct chemical characteristics, which permits "finger-printing" of gases or differentiation between gas types. In addition to lacking heavier gas components (propane, butane, ethane, etc.), the presence of helium in detectible amounts is a primary fingerprint for natural gas imported from the central US and previously stored in the deep storage zone.

Natural gas can occur in subsurface environments as various phases. Understanding gas phases is important because each phase exhibits specific physical properties, and thus posses different flow characteristics. These phases include free gas, liquefied petroleum gas, and dissolved gas in both water and oil depending on pressures and temperatures. When evaluating the potential for shallow gases reaching the surface, the primary phases of concern are free gas and dissolved gas in groundwater.

Migration Pathways

Studies have detected natural gas at the surface in the PDR area, as well as areas overlying other oil fields. Surface gases can originate from biogenic, thermogenic, or storage sources, or a combination of these sources. Gas reaches the surface through various natural, man-made, or combination migration pathways.

Both biogenic and thermogenic gas were detected by ETI (2000) during a soil gas survey in the Playa Vista area. Following a second phase of evaluation ETI (2001) concluded, "storage gases are not present in any of the methane anomalies observed east of Lincoln Blvd." Routine surface monitoring SCG wells found storage gases were reaching the surface through casing leaks and along the well casings in three

wells. Biogenic gas was detected in four abandoned wells in the PDR field area, resulting in re-abandonment of these wells to eliminate the leaks.

Major Pathways

Man-made structures can convey gas to the surface from deep or shallow sources. A list of the most common man-made structures that could serve as vertical conduits include:

- Old abandoned oil and gas wells or dry holes, (abandoned prior to current DOGGR regulations
- Previously undocumented wells and dry holes
- Existing water extraction or injection wells
- Old abandoned water wells
- Monitoring wells
- Recently plugged and abandoned oil and gas wells (abandoned in accordance with current DOGGR regulations)

Gas can also reach the surface through natural geologic features, which may facilitate vertical, lateral, or oblique migration. The geologic features most likely to serve as potential pathways include:

- Surficial deposits
- Porous and permeable formations
- Aquifers
- Fracture systems
- Fault planes
- Other geologic features and structures, such as unconformities

The potential gas migration reaching the surface is considered greatest through or along man-made structures. In general, geologic pathways are relatively “tight” in the “shallow” and storage zones. Fractures, faults, and spaces between individual grains are minimized due to the tremendous overburden pressure (the weight of the rock materials). Within the Project area, wells penetrate shallow and deep gas zones at various depths. Once penetrated, a poorly constructed or abandoned well can serve as a conduit for upward migration of natural gas. Such conduits can develop as old wells deteriorate (over the 70 years), even when proper construction and abandonment methods have been applied.

Natural gas of biogenic, thermogenic, and storage sources can travel through a variety of man-made structures to migrate both vertically and laterally through the subsurface. In addition to oil and gas wells, both active and abandoned water wells can serve as vertical conduits, especially in the upper 1,000 feet of geological section. Utility trenches, storm drain systems and sewer lines provide lateral migration pathways, accumulation areas, and near-surface openings for natural gas release.

Natural Pathways

Various studies prepared by SCG, DOGGR, US Geological Survey (USGS), and California Geological Survey (CGS) suggest faults in the PDRGSF area . The USGS and CGS publish maps showing documented faults and reports describing such faults. No through-going active surface faults have been documented by either the USGS or CDMG. None of the information or reports reviewed for this study present conclusive evidence of active surface faults in the immediate project vicinity. The Compton

Blind Thrust Fault passes beneath the project site at much greater depths (>20,000ft), but no related fault is yet known to cut through the storage zone.

The Charnock fault is considered potentially active, and crosses the northeastern edge of the PDRGSF. Smaller, shorter faults and fracture systems are inferred in various units of the storage zone within the PDR field, but are not likely to transmit large volumes of crude oil or natural gas during short time intervals (days, weeks, or months). Naturally occurring subsurface migration of petroleum hydrocarbons typically takes place over extended periods of time, possibly tens or hundreds of thousands of years or more. Natural transmission of hydrocarbons through these systems is known within the oil and gas industry as "micro seeps." Upward migration of oil and gas through micro-seeps allowed hydrocarbon emplacement in shallow zones. Significant natural upward migration from the storage zone is unlikely during the productive life of the PDR field.

The original reservoir pressure in PDR field was 2,750 psi, which is within the range of normal pressure gradient for the storage zone depths (Davis, 2000). Operating pressures (maximum 1,700 psi) are about 38 percent lower than original reservoir pressures. Therefore, significant volumes of storage gas would not be expected to migrate to the surface through natural geologic features.

Past and proposed withdrawal of gas from the storage zone is not expected to cause downward movement of groundwater or other fluids from shallow zones. With decreased reservoir pressures, lithostatic forces (rock overburden pressures) become more dominant, further sealing (through compaction) any open fractures or void spaces in the cap rock. Thus, the potential for fluid or gas migration through geologic pathways either into or out of the storage zone is low.

Shallow gas may migrate through younger earth materials to reach the surface. Both Pleistocene and Holocene sedimentary deposits include many permeable horizons or zones. Both biogenic and thermogenic gas from shallow zones can migrate, both vertically and laterally, through these permeable layers. Gas migration would involve both free-phase and dissolved-phase gases (dissolved in water). In the Playa Vista area immediately northeast of the project site, the contact between the San Pedro Formation and overlying younger alluvium form a contact between geologic units that could affect both lateral and vertical subsurface fluid or gas movement.

Faults affecting the project vicinity are discussed above under Structure and Seismicity. Based on his review of geologic reports and well records for PDR field, Davis (2000b) concludes that there is no evidence for faults cutting through the primary or secondary seals, and there is no evidence of through going fracturing of the seal. In the project area, the northwest-southeast trending Charnock fault (potentially active) is the closest documented fault in the vicinity. It crosses through the area east of the PDRGSF and project site. Although it is possible that undocumented faults could exist and contribute to upward gas migration, rates would not be significant compared to leaking wells.

During well drilling, fractured zones were encountered in some boreholes. The type (open, closed, sealed) and extent of fracturing were not determined from the information available. This fracturing could be related to minor faulting in the immediate vicinity. Minor faults could affect subsurface gas migration, by either acting as barriers to lateral movement or pathways for vertical migration. Gas movement rates associated with minor faulting would not be significant compared to leaking wells.

The presence of shallow high-pressure gas zones encountered in the Playa Vista area indicates confinement of upward hydrocarbon migration from these intervals. At these locations, shale intervals within the Pico and Repetto Formation form effective cap rock or seals. If natural upward migration pathways were present, such as open fracture systems, gas in these shallow zones would exhibit a normal pressure gradient. High pressure was not released until these zones were penetrated during well drilling operations.

Leaking Wells

Several factors contribute to possible gas migrations through abandoned and active wells such as original drilling, development and completion, operations and redevelopment, and abandonment. Many wells and dry holes were drilled during the exploration and early field development period. Dry or non-commercial wells were abandoned. Common practice by some operators in the 1920s through 1940s was to abandon wells and dry holes by filling them with construction debris or other items, such as telephone poles or railroad ties, prior to covering the surface with soil. These improperly abandoned wells have been unearthed during grading operations for construction sites located over old oil field in several areas of the Los Angeles Basin. Many of these wells and dry holes may not have been plugged to modern standards. Current abandonment requirements have developed since the 1950s to the more stringent standards today. Old dry holes and noncommercial wells have a high potential to provide migrations pathways.

Early in the history of oil and gas development in California and the United States, noncommercial or dry holes were drilled and abandoned without proper documentation and reporting, and some of these abandoned dry holes and wells may not have been recorded by the original drillers or DOGGR. Absence of unknown abandoned holes cannot be determined with certainty. Should they exist, they could serve as migration pathways.

Well construction, redevelopment, and abandonment deficiencies can contribute to gas migration problems. If cement bonds between the casing and surrounding natural formation do not form adequate storage seals, pressurized leakage is possible. Leakage through the annular space between casing and formation can occur under the following circumstances: lack of proper seals, inadequate seal or poor cement bonds with bore walls, channels within cement, deterioration of annular seals over time, and fracturing or cavitation of enclosing walls.

When present, shallow high-pressure gas zones can create problems for cement annular seals. During the well completion process, cement slurry is pumped into the annular space between the hole drilled (rock face) and casing to form a seal. Gas from shallow high-pressure zones can enter cement within the annular space during this process. Gas bubbles within the slurry weakens the cement and can compromise seals around these zones. In turn, poor seals could allow fluid migrations and enhance corrosion of both casing and cement in these areas. If large volumes of gas enter the annular space, vertical channels within the cement seal can also form. Marlow (1989) discusses the mechanisms contributing to compromised integrity of annular cement seals associated with gas zones.

Structural integrity of well components and seals is not permanent. Over extended periods of time, they eventually deteriorate. Both casings and seals are subject to corrosion caused by exposure to chemical attack, high and fluctuating pressures, high temperatures, and earthquakes. Steel casing is susceptible to

rusting from saline and sour/sulfurous water produced along with the oil. Hydrogen sulfide of sour water and sour gas can corrode both steel and cement. Differential earth stresses (e.g., local earthquakes) can affect well integrity, even causing casing to collapse. Any deterioration of well integrity can lead to leaks.

Abandoned Wells

During past routine SCG surveys of abandoned wells, SCG determined that three previously abandoned wells on the Marina del Rey Peninsula (not part of the proposed project) would be re-abandoned following detection of leaking natural gas. Well designations and locations for these wells were not provided for this study. Although the origin of detected gas was biogenic and not the storage zone, SCG assumed responsibility and re-abandoned these wells to seal the leaks.

A leak was recently discovered in a well in the MDR area designated as Block No. 11 (while this well is not part of this proposed sale of property, it is in the vicinity of Cluster 12). This well was abandoned in April 1993 and sold with the surface parcel in 1997. The leak was discovered when DOGGR reviewed and tested the well prior to construction on the site. Preliminary analyses indicate that gas may be biogenic. Based on information available for this review, gas detected in this well is probably not emanating from the PDR storage facility. SCG will assume responsibility and re-abandon this well prior to site construction.

In the Playa Vista area east of the proposed project site, ETI (2000) conducted a soil gas survey. Several gas anomalies were identified during this survey. Analyses of samples collected indicates a combination of both biogenic and thermogenic gas origins. The presence or absence of storage gas was not confirmed during this study.

An examination of DOGGR maps showing locations of abandoned wells in the gas study area indicates that at least two of these soil gas anomalies correspond with locations of old abandoned wells or dry holes (Universal City Syndicate, Inc. Vidor No. 1 and Cooperative Development Co. Community No. 1). ETI (2000) indicates that a shallow dry hole (A.L. Kitselman, Del Rey No. 1) was also present in an area with surface gas anomalies. These old wells or dry holes may not be abandoned in accordance with current DOGGR regulations. In addition, the two deep abandoned holes penetrated shallow high-pressure gas zones during drilling. As such, they could provide vertical conduits through which thermogenic gas from shallow zones could reach the surface.

Reported Leaking Wells: Southern California Gas

A review of limited Southern California Gas Company records indicates past leaks and surface seepage documented in ten wells located in the Del Rey Hills areas. Following repairs in the ten identified wells, four of these wells experienced recurrences or new leaks. These wells and information on their respective leaks are summarized in Table F-1. Data provided for review was limited; therefore, this list of documented leaks may not be comprehensive.

- Based on the data provided, three leaking wells were discovered following detection of soil gas seepage. During routine field monitoring, near surface gas was identified around three wells: Well

No. 12-1 (1974), Well No. 24-2 (1975) and Big Ben No. 1 (1991). Leaks in Wells No. 12-1 and 24-2 were repaired, while Big Ben No. 1 was plugged and abandoned in 1991.

- Of the ten wells with documented leaks, three of them are included in the subject project: Well No. 29-1 (1959), Lor Mar No.1 (1981) and Joyce No.1 (1987). Casing leaks in each respective well were repaired. These three wells are on parcels (lots) subject to sale following approval of the proposed project. The Lor Mar No. 1, Joyce No. 1 and Well No. 29-1 were plugged and abandoned in 1992, 1993 and 1994, respectively.

- The ten wells are located between 1/2 mile and 1 mile south to southwest of the Universal City Syndicate Inc. Vidor No. 1. The Vidor No. 1, an old abandoned well, experienced a "blow-out" when shallow gas was encountered during drilling at depths from 1,140 to 1,150 feet. Multiple shallow gas zones were penetrated by this well. At least 4 other wells drilled in the Vidor No. 1 vicinity also penetrated various shallow gas zones at depths ranging from 510 to 3,434 feet.

Leaks in several of the ten wells listed occurred at similar depths to where shallow gas was encountered in old wells experiencing "blow-outs". These old wells were located immediately east and northeast of the subject project. Insufficient data was provided to correlate documented leaks with shallow gas zones.

Gas Responsibility and Rights

SCG owns most, if not all mineral rights in the PDR field and storage zone. As such, SCG is responsible for any gas leaks originating the PDRGSF area of influence and from thermogenic sources. Due to the nature of recent alluvial deposits, the generation of natural biogenic gas at the project site is likely. Biogenic gas in the area is probably related to decomposition of organic material deposited within a lagoon environment. In addition, some biogenic gas could also result from alteration of other hydrocarbons, including thermogenic gas, crude oil, or spilled materials. SCG is not responsible for occurrences of biogenic gas at the project site.

TABLE F-1
SUMMARY OF DETECTED GAS LEAK

Well Name	Problem	Depth (ft bgs)	Year Detected	Well Location
Well No. 29-1	Stage collar leak	723	1959	Between Falmouth Ave. & Calabar Ave., south of intersection with Cabora Dr.
Big Ben No. 1	Casing leak	150	1964	Between 79th St. & Veraqua Dr., northeast Zayenta Dr.
	Surface seepage		1991	
Blackline No. 1	Casing leak	1,064	1969	South of Cabora Dr., west of Veraqua Dr. and Zayenta Dr. intersection
	Casing leak	1,060	1986	
SoCal No. 4	Casing leak	3,216	1971	NW of Cabora Dr., about 1,000 ft. NE of intersection with Falmouth Ave. [a]
SoCal No. 3	Casing leak	3,300	1972	NW of Cabora Dr., about 1,000 ft. NE of intersection with Falmouth Ave.[a]
	Casing leak	3,300	1975	
	Casing leak	2,109	1977	
Well No. 12-1	Surface seepage	481	1974	Southeast of 81st St., north of intersection with 83rd St.
	Casing leak	210	1979	
Well No. 24-2	Surface seepage	191	1975	Northwest of 79th St., west of Zayanta Dr.
Pomoc No. 1	Casing leak	2,815	1975	West of Zayanta Dr., between 79th St and Cabora Dr.
Joyce No. 1	Casing leak	750	1987	Northwest of 82nd St., east of Saran Dr.
Lor Mar No. 1	Casing leak	720	1981	South of 83rd St., east of Saran Dr.

[a] Surface location of directionally drilled well. Bottom hole locations were not made available.

SOURCE: (DOGGR, various dates)

APPENDIX G

HYDROLOGY AND WATER QUALITY BACKGROUND INFORMATION

APPENDIX G

HYDROLOGY AND WATER QUALITY BACKGROUND INFORMATION

ENVIRONMENTAL SETTING

REGIONAL SETTING

Ballona Creek is a concrete-lined channel that conveys urban runoff and storm water runoff from a 78,000-acre watershed consisting of heavily urbanized Los Angeles, Culver City and Beverly Hills, the north slope of the Baldwin Hills, and portions of the Santa Monica Mountains to the north. The eastern extent of the watershed reaches I-110 near downtown. Much of the storm water falling on the city is collected in street drain inlets and conveyed in large underground sewers westward to the concrete-lined Ballona Channel. The channel empties into the Santa Monica Bay near the Marina del Rey marina and the Ballona Wetlands. As the channel nears the ocean, it becomes a tidally influenced estuary. Along the coast, storm water and urban runoff is conveyed directly to the beach through local sewers and drainage canals. The City and County of Los Angeles Department of Public Works are responsible for maintaining storm drains to minimize flooding within their jurisdiction. Flooding has been minimized through the construction of storm drains, flood control channels, detention basins, and pumping plants.

LOCAL SETTING

STORM DRAINAGE

The PDR lots sites are located on the Westchester Bluffs that drain northward on Falmouth Street to the Ballona Wetlands on the southern edge of the channelized Ballona Creek. No underground storm sewers exist in the streets within the project area. For both the PDR and MDR sites, storm water runoff is collected in gutters and transported off-site. The PDR lots drain to Manchester Avenue and then ultimately to the Ballona Wetlands along Falmouth Street. The MDR lots drain directly westward onto Venice Beach.

According to the City of Los Angeles Safety Element, the two lots located in MDR are within a 100-Year flood zone, directly on the beach at an elevation of less than 15 feet above mean sea level (amsl). The PDR properties are approximately 150 feet amsl and not within a flood zone.

GROUNDWATER

Regional ground water levels are at or near sea level (Chambers, August 2000). Shallow ground water in the vicinity of Playa del Rey has been degraded in the past from seawater intrusion as a result of over-

pumping of the central basin. However, water levels have subsequently risen in recent decades as extractions have been limited and seawater intrusion barriers have been implemented. The tidally influenced groundwater elevations within Playa del Rey vary from about two feet above to ten feet below mean sea level with flow to the northeast.

TSUNAMI

Tsunamis are extremely long-period waves often associated with underwater earthquakes. Other mechanisms such as volcanic activity or submarine landslides can also generate tsunamis. Due to its proximity to the Pacific Ocean and its low-lying elevations, the Marina del Rey area is subject to potential tsunami hazards. The maximum expected run-up of a tsunami wave in Venice Beach is approximately 9.6 feet in a 100-year time frame from a distant earthquake. Tsunamis generated from local earthquakes may be larger, but are less likely to occur. The two lots located in MDR would be subject to potential tsunami hazards.

REGULATORY SETTING

FEDERAL

The Clean Water Act (CWA) is administered by the United States Environmental Protection Agency (USEPA) to protect water quality. Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) to regulate discharges into waters of the US. The USEPA has delegated authority for implementing the NPDES program in the State of California to the State Water Resources Control Board (SWRCB), which in turn authorizes the Regional Water Quality Control Boards (RWQCB) to issue permits.

STATE STANDARDS

The RWQCBs have prepared Basin Plans, which identify beneficial uses and water quality objectives for each water resource in the state. The SWRCB requires that all discharges to waters of the US first obtain NPDES discharge permits. The NPDES permits include waste discharge requirements that establish water quality thresholds to maintain designated water quality objectives and beneficial uses. The NPDES permitting program includes storm water discharges for municipal storm sewer systems, industrial activities, and construction activities. To obtain coverage under the statewide general construction storm water discharge NPDES permit for a construction site greater than one acre, a project proponent must prepare a Storm Water Pollution Prevention Plan (SWPPP) outlining best management practices to be employed to avoid water quality impacts to local receiving waters.

In addition, pursuant to Section 303(d) of the CWA, the SWRCB has compiled a list of impaired water bodies in the state. The list includes Ballona Creek, Ballona Estuary, and the Ballona Creek Wetlands.

APPENDIX H

LAND USE BACKGROUND INFORMATION

APPENDIX H

LAND USE BACKGROUND INFORMATION

ENVIRONMENTAL SETTING

REGIONAL SETTING

The Southern California Gas (SCG) Playa del Rey Gas Storage Facility (PDRGSF) is located within Southern California within the City and County of Los Angeles. Thirty-four of the lots are located within the Playa del Rey (PDR) community, while two lots are located in the community of Marina del Rey (MDR). PDR is primarily a residential community with some commercial uses while MDR is a beach, harbor, and tourist-oriented community. PDR is located approximately 12 miles southwest of downtown Los Angeles and MDR is located northwest of Playa del Rey.

LOCAL SETTING

The main facilities of the PDRGSF are located at 8141 Gulana Avenue in the community of Playa del Rey, California. A complete list of the 12 wells on the PDR and MDR lots is included in Table 1 in the Project Description.

Thirty-four of the lots for sale are scattered throughout the PDR residential community. These 34 lots are not located in the coastal zone and are scattered throughout a long-established neighborhood located on top of a bluff overlooking the Ballona Wetlands and MDR (see Figure H-1). The lots are not located on the bluff's edge and most have no views. Thirty of the PDR lots are zoned for single-family residential development (R1-1); three of the lots are zoned multi-family residential (R3-1); and one of the lots is zoned for commercial development (CR-1).

Two of the lots for sale are located in a residential community on the Marina Peninsula approximately two miles north of the 34 lots in PDR. The two lots are located in a residential community on the Marina Peninsula in MDR. Both of the lots are zoned for multi-family residential (R3-1) development and are located within the coastal zone (see Figure H-2).

The sale of the lots has the reasonably foreseeable future action of infill structural development. SCG currently has four willing buyers, who would presumably develop the lots in accordance with their current zoning. Assuming the lots are developed in accordance with current zoning and surrounding land uses, development of 30 single-family residential homes, five apartment buildings, and one apartment building and/or commercial building would be constructed.

EXISTING LAND USE PATTERNS

The 36 lots are undeveloped in a highly developed existing community. With two exceptions, none of the lots are currently being used. In the past, SCG has permitted through written agreement the temporary use of two lots for landscaping. As part of the sales and subsequent purchase, the written agreements would be terminated and the landscaped areas would be reclaimed from the adjacent property owners. The remaining lots are private property and there is no evidence that these lots have been used with explicit permission from SCG. Therefore, the public has no reason to believe that the properties are available for public use.

All of the residentially zoned lots are surrounded by residential uses such as single-family detached dwellings. The commercially zoned lot is surrounded by multi-family residential uses and commercial uses.

REGULATORY SETTING

The main tools used in land use regulation are planning documents, ordinances, and permitting procedures, as employed by local agencies. The general plan assembles the local jurisdiction's basic land use doctrine and regulates future land use decisions. The zoning ordinance governs the type and intensity of land uses and sets standards for development within a city or county. The following outlines the general plans and zoning ordinances that govern the facility property and surrounding lands.

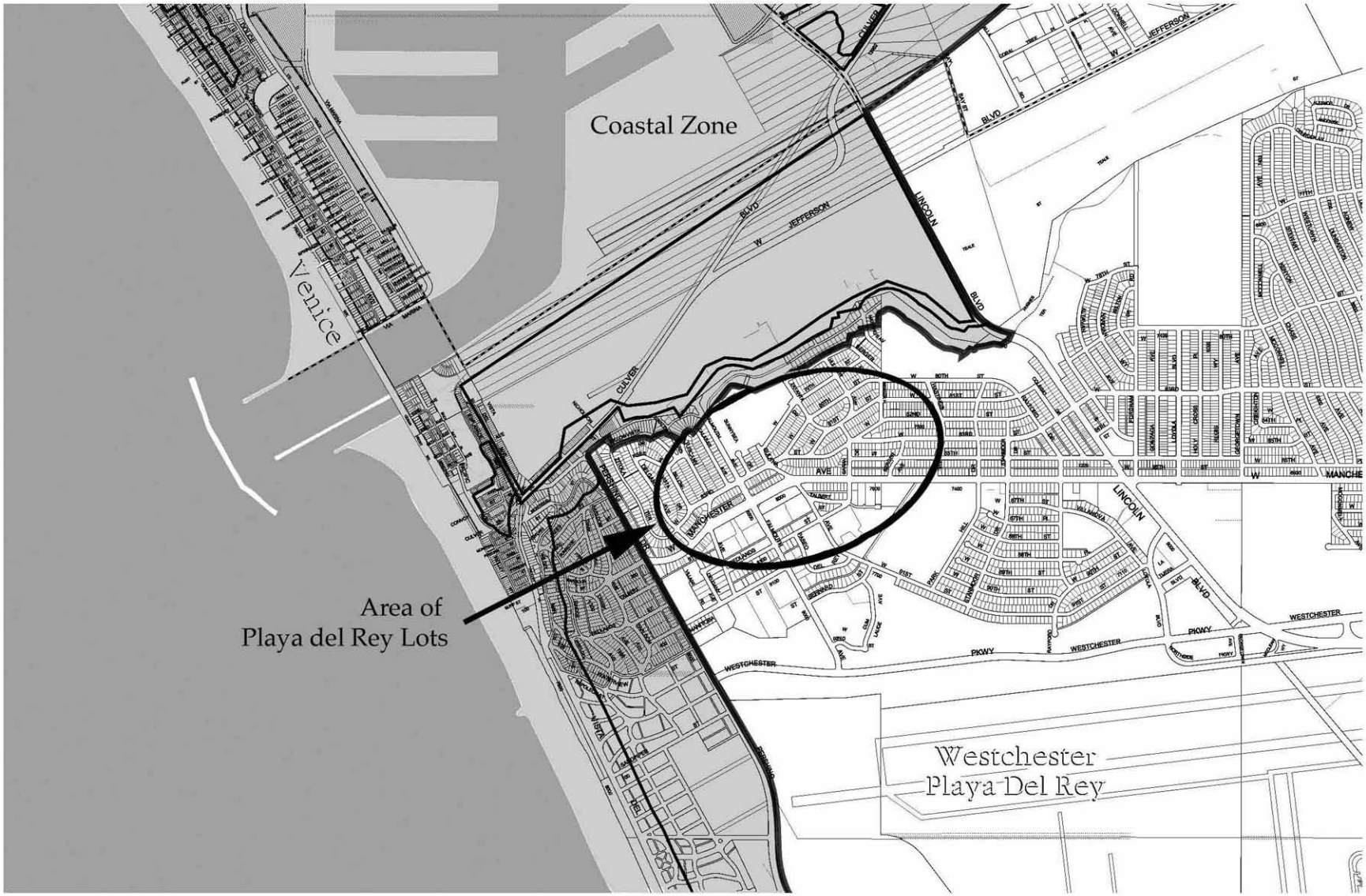
GENERAL PLAN AND ZONING ORDINANCE

PDR and MDR are communities within the City and County of Los Angeles, represented by a City Council. PDR falls under the jurisdiction of the Westside Planning Area of the County of Los Angeles *General Plan* (see Figure H-1) and the Southwest sub-region of the City of Los Angeles *General Plan* (see Figure H-2). The two communities fall within the Westchester-Playa del Rey Community Plan and the Venice Community Plan under the Land Use element of the City of Los Angeles *General Plan*.

WESTCHESTER-PLAYA DEL REY DISTRICT PLAN

The Westchester-Playa del Rey District Plan (Westchester Plan) identifies the 34 lots located in PDR as within the Westchester-Playa Del Rey Community Plan Area (CPA) of the City of Los Angeles. The Westchester Plan is designed to accommodate the anticipated growth in population and employment of the District to the year 2000 (Los Angeles, 1974). The CPA is covered by the following Specific Plans: the Coastal Transportation Corridor Specific Plan; the Coastal Bluffs Specific Plan; and the Playa Vista Specific Plan.

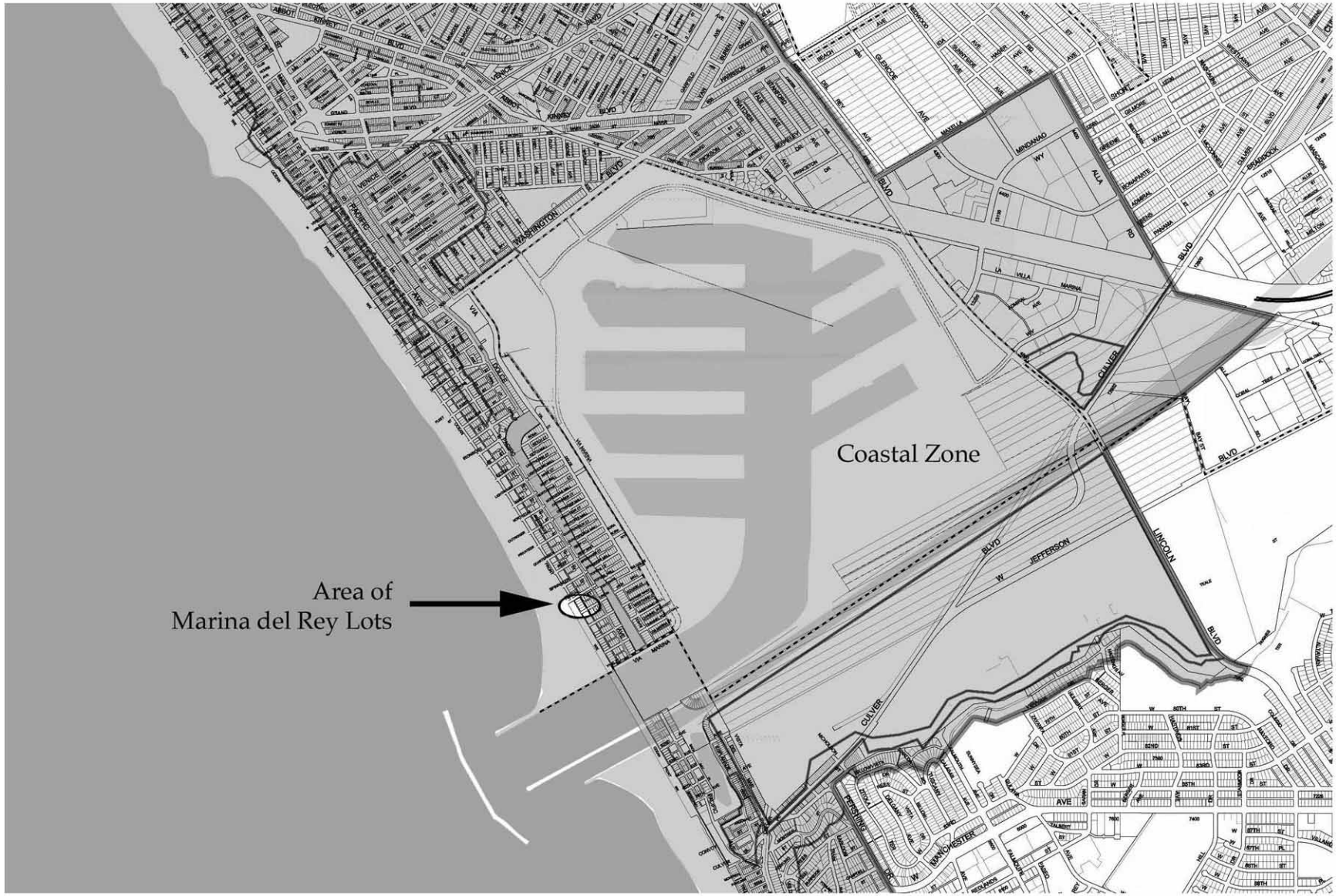
All of the 34 lots located within the CPA are within the Los Angeles Coastal Transportation Corridor Specific Plan Area. One lot in PDR, that includes well 29-1, also falls within the Coastal Bluffs Specific Plan Area.



SOURCE: Environmental Science Associates, USGS, Pacific Meridian Resources

Figure H-1

Coastal Zone- Westchester-Playa Subarea



SOURCE: Environmental Science Associates, USGS, Pacific Meridian Resources

Figure H-2

Coastal Zone- Venice Subarea

VENICE DISTRICT PLAN

The two lots on the Marina Peninsula are located in MDR. This area is part of the Venice Community Plan Area of the City of Los Angeles. The two MDR lots are also within the Coastal Transportation Corridor Specific Plan.

CITY OF LOS ANGELES GENERAL PLAN OPEN SPACE ELEMENT AND CONSERVATION ELEMENT

The Open Space Element defines areas of open space land and areas of desirable open space land. Desirable open space land indicates that certain appropriate measures should be taken to ensure continued maintenance of open space character. The Open Space Element indicates that the project site is not within a designated open space area or within a desirable open space area.

The Conservation Element indicates that the project site is not within an ecologically important area. The Public Recreation Plan, referenced in the Conservation Plan, provides the following statistics regarding neighborhood parks. The long-range goal for neighborhood recreation sites is 4 acres of parkland and open space per 1,000 people. However, recognizing the current shortage of recreation areas in the highly developed Los Angeles region, short-term and intermediate standards have been set at 2 acres of parkland and open space per 1,000 people. There are currently no neighborhood, community, or regional parks within the project area. The City of Los Angeles General Plan Open Space and Conservation Plan Elements states the following:

- Desirable open space land indicates that certain appropriate measures should be taken to ensure continued maintenance of open space character.

The Open Space Element indicates that the project site is not within a designated or desirable open space area. The Conservation Element indicates that the project site is not within an ecologically important area.

ZONING

Thirty-five of the 36 lots proposed for sale are zoned for residential use. The lots are clustered into 12 groups, as many of the lots are contiguous as shown Figure 3 and Figure 4 in the Project Description. Table H-1 shows zoning, assessor parcel numbers (APN), nearest addresses, and specific plans for each cluster of lots. Of the 33 residentially zoned lots located in Playa del Rey (PDR), 30 lots are zoned R1-1, Low Density Residential in an established area for single-family residential neighborhoods. Three of the lots are zoned R3-1, Medium Density Residential. One lot proposed for sale is zoned CR-1, Limited Commercial. This lot is located in Playa del Rey, south of Manchester Avenue on Saran Drive. The lot is located in a transition area where surrounding properties are zoned for Residential and Commercial uses (Los Angeles County, 1984). The two residentially zoned lots located in Marina del Rey (MDR) are zoned multi-family residential in an established area for multi-family units.

The R1 zone is a single-family residential zone. Permitted uses include single-family dwellings, government-owned parks, playgrounds, community centers, and permitted accessory uses. The R1 zone allows 3 to 7 dwelling units per gross acre.

TABLE H-1
ZONING AND SPECIFIC PLAN DESIGNATION

Well #	Lots	Well Name	Nearest Address	APN	Zoning	Specific Plan
1	3	Merrill 1	7851 West Manchester Avenue	4115024805	R3-1	LACTC[a]
2	5	13-1	7912 West 83rd Street	4115024805	R1-1	LACTC
3	8	23-1	7966 West 79th Street	4115028806	R1-1	LACTC
4	2	Joyce 1	7737 West 82nd Street	4114022800	R1-1	LACTC
5	3	Lormar-1	7726 West 83rd Street	4114023801	R1-1	LACTC
6	1	Anglo American	7565 81st Street	4114019801	R1-1	LACTC
7	2	O and M 1	7714 West 83rd Street	4114023800	R1-1	LACTC
8	4	Samarkand 1	8244 West 83rd Street	4115012800	R1-1	LACTC
9	3	29-2	8219 Falmouth Avenue	4115014800	R1-1	LACTC
10	2	29-1	8103 Falmouth Avenue	4115014801	R1-1	LACTC & CB[b]
11	1	Hisey-1	8600 South Saran Drive	4119001800	CR-1	LACTC
12	2	Troxel 1	5107 Ocean Front Walk, MDR	4294006019	R3-1	LACTC

[a] LACTC: Los Angeles Coastal Transportation Corridor Element;
[b] CB: Coastal Bluffs Element

SOURCE: Chambers Group, 2000

The R3 zone is a multiple dwelling zone. Permitted uses include single-family dwellings, two-family dwellings, group dwellings, multiple dwellings, or apartment houses. R3-1 Medium Density Residential allows 24-40 dwelling units per gross acre.

The CR zone is a limited commercial zone. Permitted uses include churches, government-owned parks, public parking areas, any single- or two-family dwellings, apartment houses, mini-shopping centers, restaurants, and uses wholly conducted within an enclosed building such as a hotel, bank, or office. There is a six-story height limit in the CR zone. In addition, no merchandise is to be displayed, sold, or serviced and all activities are to be conducted wholly within an enclosed building.

COASTAL TRANSPORTATION CORRIDOR SPECIFIC PLAN

The Coastal Transportation Corridor (CTC) Specific Plan states that the "purpose of the Specific Plan is to mitigate transportation impacts generated by new commercial and industrial development and to provide a mechanism to fund specific transportation improvements due to transportation impacts generated by new development" (Los Angeles, 1993). The CTC states that single-family dwellings are exempt from the provisions of this area. Thus, 30 of the 34 lots located in Playa Del Rey would be exempt due to their R1-1 zoning and the nature of the presumed development (single-family dwelling).

One lot within the PDR area is zoned CR-1, Limited Commercial. The following CTC Plan policy applies to this lot only: "For projects generating 42 or fewer trips, the applicant shall make dedications/improvements and pay the Transportation Impact Assessment fee." The lot in the MDR area is zoned R3-1, Multi-Family Residential. As no more than 15 units could be physically constructed on either of these lots, a traffic assessment is not required

COASTAL BLUFFS SPECIFIC PLAN

Officials of the City and County of Los Angeles have a cooperative agreement to jointly prepare the Local Coastal Plan under conditions stated in the Coastal Commission approved work program (Los Angeles County, 1996). The group of two lots located near the 8600 block of Calabara Road, falls within the boundaries of Sub-area 1 of the Coastal Bluffs Specific Plan. The purpose of this plan is to protect, maintain, enhance, and where feasible, restore the overall quality of the coastal environment and its natural and cultural resources (City of Los Angeles, 1994). The lots with Sub-area 1 are zoned R1-1, Low Density Residential. The following regulations apply to the development of these lots:

- Maximum height of a building or structure shall not exceed 36 feet. On an upslope lot, height shall not exceed 45 feet. No project shall exceed 25 feet in height within 10 feet of the front lot line. Provisions from LAMC Section 12.21.1 B 3, which permits additional height, shall not apply to any single-family dwelling.

- Side yards for reverse corner lots where the width of the lot is 60 feet or greater shall not be less than 10 feet in width facing the public street.

- A project extending more than 6 feet above grade shall cover no more than 40% of the lot. For a project that is substandard as to width and area may cover no more than 45% of the lot.

PLAYA VISTA SPECIFIC PLAN

The project area does not include any lots within the Playa Vista Specific Plan area.

APPENDIX I

NOISE BACKGROUND INFORMATION

APPENDIX I

NOISE BACKGROUND INFORMATION

ENVIRONMENTAL SETTING

EXISTING NOISE ENVIRONMENT

Ambient noise levels in the Playa del Rey (PDR) project area are principally affected by traffic on local streets and aircraft overflights associated with operations at Los Angeles International Airport (LAX). The only major roadway in this neighborhood is Manchester Avenue, which supports a strip of commercial businesses in the southeastern portion of the project area. The intersection of Manchester Avenue and Falmouth Avenue in PDR lies approximately 0.75 miles northwest of the northernmost runway at LAX. Santa Monica Municipal Airport lies about three miles north of Manchester Avenue. Operations at this airport do not affect noise levels in the project area.

Aircraft overflights associated with LAX operations also affect ambient noise levels in the Marina del Rey (MDR) lots. The two lots, located at the intersection of Union Jack Street and Speedway Avenue, lie approximately two miles northwest of the northernmost runway of LAX. Santa Monica Municipal Airport lies about three miles northeast of the Union Jack Street and Speedway Avenue intersection. As in PDR, operations at this airport do not affect noise levels in the project area. Unlike Playa de Rey, no major roadways run through MDR project area. However, ambient noise levels in MDR are likely to be affected by sounds of the surf, as these lots are located directly on the Venice Beach strip.

The 1992 Draft Environmental Impact Report (DEIR) for the Master Plan Project for Playa Vista determined existing noise levels in the project area by modeling conditions at 23 locations within PDR and surrounding communities. Field measurements of traffic and stationary source noise levels were compiled to verify the accuracy of the modeling results. The identification of existing noise levels was based on modeling results and field measurements. Several of the modeled locations are within the project area (Chambers, 2000).

Community Noise Equivalent Level (CNEL) at the six receptor locations within the project area ranged from a low of 51 dBA at the Loyola Marymount University Church to a high of 73 dBA in the vicinity of the Church and YMCA facilities along Sepulveda Boulevard at 80th Street. Noise levels between 64 and 71 dBA characterize most receptor locations.

According to noise contours in the City of Los Angeles General Plan Noise Element, the southernmost areas of the PDR area along Manchester Avenue are very close to the 65 dB CNEL contour for Los Angeles International Airport.

SENSITIVE RECEPTORS

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hospitals, and nursing homes are considered to be the most sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The 36 project lots are primarily located within residential areas. Hence single family homes or apartments abut most of the project lots with the exception of Cluster 5 which is located adjacent to commercial uses.

REGULATORY SETTING

If the owner(s) of the surface rights develops the lots in the future, all development would be subject to regulations, plans and policies developed by the State of California, the City of Los Angeles and the Los Angeles County Airport land Use Commission (ALUC) to limit noise exposure at noise-sensitive land uses. These include Title 24 of the *California Code of Regulations* (for new multifamily residential developments), the Los Angeles General Plan Noise Element, the Los Angeles Municipal Code (Chapter XI- Noise Regulation), and the Los Angels Airport Land Use Plan (ALUP).

TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in *California Code of Regulations*, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and, where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. Title 24 standards are enforced through the building permit application process in Los Angeles, as in most jurisdictions.

CITY OF LOS ANGELES GENERAL PLAN NOISE ELEMENT

The City's General Plan Noise Element acts as the policy document that outlines guidelines for noise/land use compatibility for development and planning purposes. The Noise Element of the General Plan identifies compatible noise environments for different types of land uses in the City. Table I-1 contains

TABLE I-1
GUIDELINES FOR NOISE COMPATIBLE LAND USE

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB)		
	Acceptable[a]	Conditionally Acceptable[b]	Unacceptable[c]
Residential	Up to 55	Up to 70	Above 70
Transient Lodging, Hotel, Motel	Up to 55	Up to 70	Above 70
School, Library, Church, Hospital, Nursing Home	Up to 55	Up to 75	Above 75
Playgrounds, Neighborhood Parks	Up to 65	Up to 75	Above 75
Office Buildings, Business, Commercial, Professional	Up to 65	Up to 75	Above 75

[a] Specified land use is satisfactory. No noise mitigation measures are required.
[b] Use should be permitted only after careful study and inclusion of protective measures as needed for intended use and to satisfy policies of the Noise Element.
[c] Development is not feasible in accordance with the Noise Element. Use is prohibited.

SOURCE: Los Angeles Department of City Planning, Noise Element of the Los Angeles City General Plan, Feb 3, 1999

the noise/land use compatibility guidelines for those types of land uses proposed as part of the project and the existing land uses that could be affected by project-related noise. These guidelines are to be used when evaluating the noise impacts of a proposed project.

The Noise Element establishes specific programs and policies for airport, non-airport and land use development projects. Applicable policies include the following:

- For a proposed development project that is deemed to have a potentially significant noise impact on noise sensitive uses, require mitigation measures, as appropriate, in accordance with California Environmental Quality Act and city procedures. (P-11)

- Continue to plan, design and construct or oversee construction of public projects, and projects on city owned properties, so as to minimize potential noise impacts on noise sensitive uses and to maintain or reduce existing ambient noise levels. (P-13)

- Use, as appropriate, the “Guidelines for Noise Compatible Land Use” shown in Table I-1 or other measures that are acceptable to the city, to guide land use and zoning reclassification, subdivision, conditional use and use variance determinations and environmental assessment considerations, especially relative to sensitive uses, within a CNEL of 65 dB airport noise exposure areas and within a line-of-sight of freeways, major highways, railroads or truck haul routes. (P-16)

LOS ANGELES MUNICIPAL CODE NOISE REGULATIONS

The City of Los Angeles has numerous noise ordinances and enforcement practices that apply to intrusive noise and that guide new construction. The City's comprehensive noise ordinance (LAMC Section 111 et seq.) establishes sound measurement and criteria, minimum ambient noise levels for different land use zoning classifications, sound emission levels for specific uses (radios, television sets, vehicle repairs and amplified equipment, etc.), hours of operation for certain uses (construction activity, rubbish collection, etc.), standards for determining a disturbance of the peace, and legal remedies for violations. Its ambient noise standards are consistent with current state and federal noise standards. The standards guide building construction, equipment installation, equipment maintenance, and nuisance noise enforcement.

The project is located within the City and County of Los Angeles and is subject to the General Plan and noise ordinances incorporated therein. Section 41.40 of the Los Angeles Municipal Code indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. of the following day on any weekday, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent hotel dwellings or apartments or other places of residence. No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling, shall perform any construction or repair work of any kind before 8:00 a.m. or after 6:00 p.m. on any Saturday, nor at any time on any Sunday.

Section 112.05 of the Los Angeles Municipal Code specifies the maximum noise level of powered equipment or powered hand tools. Any powered equipment or powered hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet from construction and industrial machinery shall be prohibited. However, the above noise limitation shall not apply where compliance is technically infeasible. Technically infeasible shall mean that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

The City's Noise Ordinance also sets limits for noise levels generated by primary noise sources in an urban environment such as radios, televisions and other devices, air conditioning and heating equipment, construction noise, vehicular noise, noise from garbage collection trucks, noise from places of public entertainment, and other general noise.

Under Section 112.02, noise from air conditioning, refrigeration, and heating equipment would be considered excessive if it would cause the ambient noise level on the premises of an adjacent occupied property to increase by more than five decibels.

Mobile sources of noise are exempt from local ordinances but are still subject to CEQA review and would be significant if the project generates a volume of traffic that would result in a substantial increase in mobile-source generated noise. Because most people can readily hear a change of 5 dBA in an exterior environment, this value was established for the project as the CEQA criterion for substantial change.

A-01

SOUTHERN CALIFORNIA

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Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Bill Davis, Simi Valley

Printed on Recycled Paper 559-09/04/03

September 18, 2003

Mr. Roosevelt Grant
CPUC Environmental Project Manager
C/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

RE: SCAG Clearinghouse No. I 20030521 Southern California Gas Company's Application to Value and Sell Surplus Property at Playa del Rey and Marina del Rey

Dear Mr. Grant:

Thank you for submitting the **Southern California Gas Company's Application to Value and Sell Surplus Property at Playa del Rey and Marina del Rey** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Southern California Gas Company's Application to Value and Sell Surplus Property at Playa del Rey and Marina del Rey**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **September 1-15, 2003** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Regional Planner
Intergovernmental Review

A-02

BOARD OF
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FIRE CHIEF

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September 19, 2003

Mr. Roosevelt Grant
CPUC Environmental Project Manager
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

SALE OF SURPLUS PROPERTY PLAYA DEL REY AND VENICE BY SOUTHERN CALIFORNIA GAS COMPANY

PROJECT LOCATION

Playa Del Rey and Venice.

PROJECT DESCRIPTION

Sale of surplus property (36 separate lots).
All of the referenced properties are within the City of Los Angeles

The following comments are furnished in response to your request for this Department to review the proposed development:

A. Fire Flow

The adequacy of fire protection for a given area is based on required fire-flow, response distance from existing fire stations, and this Department's judgment for needs in the area. In general, the required fire-flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard.

Fire-flow requirements vary from 2,000 gallons per minute (G.P.M.) in low Density Residential areas to 12,000 G.P.M. in high-density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch (P.S.I.) is to remain in the water system, with the required gallons per minute flowing. The required fire-flow for this project has been set at 2,000 G.P.M. from 3 fire hydrants flowing simultaneously. (This requirement will be increased to 4,000 G.P.M. from 4 fire hydrants flowing simultaneously for commercial development.)

B. Response Distance, Apparatus, and Personnel

The Fire Department has existing fire stations at the following locations for initial response into the area of the proposed development:

Union Jack/Speedway – Venice (1 Lot)

FS 63 – 2.10
FS 62 – 2.87
FS 5 – 3.00

Playa Del Rey locations (35 Lots) range from 1.55 miles to 4.10 miles. Only the closest and furthest locations were calculated from the closest to the furthest fire stations. Intermediate locations would fall between these numbers. Because all of these locations are more than 1.5 miles to the nearest fire station, fire sprinklers will be required in any structures built on these sites.

The sites for which distances were calculated are as follows:

Closest site

8600 South Saran Drive

FS 5 – 1.55 miles
FS 63 – 3.58 miles
FS 95 – 3.61 miles

Furthest site

8103 Falmouth Avenue

FS 5 – 2.04 miles
FS 63 – 4.07 miles
FS 95 – 4.10 miles

C. Firefighting Access

No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.

No building or portion of a building shall be constructed more than 300 feet from an approved fire hydrant. Distance shall be computed along path of travel. Exception: Dwelling unit travel distance shall be computed to front door of unit.

Hydrants may be required after review of plot plans.

Submit plot plans for Fire Department approval of access and fire hydrants.

CONCLUSION

The proposed project shall comply with all applicable State and local codes and ordinances, and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, both of which are elements of the General Plan of the City of Los Angeles C.P.C. 19708.

For additional information, please contact Inspector Griffin of the Construction Services Unit at (213) 485-5964.

WILLIAM R. BAMATTRE
Fire Chief

Alfred B. Hernandez, Assistant Fire Marshal
Bureau of Fire Prevention and Public Safety

ABH:RG:gm
c:so calif gas

A-03

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September 23, 2003

Mr. Roosevelt Grant
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San Francisco, CA 94104-4207

SALE OF SURPLUS PROPERTY PLAYA DEL REY AND VENICE BY SOUTHERN CALIFORNIA GAS COMPANY

PROJECT LOCATION

Playa Del Rey and Venice.

PROJECT DESCRIPTION

Sale of surplus property (36 separate lots). All of the referenced properties are within the City of Los Angeles

The following comments are furnished in response to your request for this Department to review the proposed development:

A. Fire Flow

The adequacy of fire protection for a given area is based on required fire-flow, response distance from existing fire stations, and this Department's judgment for needs in the area. In general, the required fire-flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard.

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FS 63 – 3.58 miles
FS 95 – 3.61 miles

Furthest site

8103 Falmouth Avenue

FS 5 – 2.04 miles
FS 63 – 4.07 miles
FS 95 – 4.10 miles

Apparatus, and Personnel

Fire Station No. 5
6621 W. Manchester Avenue
Los Angeles, CA 90045
Task Force Truck and Engine Company
Paramedic Rescue Ambulance
Battalion 4 Headquarters
Staff – 13

Fire Station No. 62
3631 Centinela Avenue
Los Angeles, CA 90066
Single Engine Company
Staff – 4

Fire Station No. 63
1930 Shell Avenue
Venice, CA 90291
Task Force Truck and Engine Company
Paramedic Rescue Ambulance
Staff – 12

Fire Station No. 95
10010 International Road
Los Angeles, CA 90045
Task Force Truck and Engine Company
Paramedic Rescue Ambulance
Staff – 12

C. Firefighting Access

No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.

No building or portion of a building shall be constructed more than 300 feet from an approved fire hydrant. Distance shall be computed along path of travel. Exception: Dwelling unit travel distance shall be computed to front door of unit.

Hydrants may be required after review of plot plans.

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CONCLUSION

The proposed project shall comply with all applicable State and local codes and ordinances, and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, both of which are elements of the General Plan of the City of Los Angeles C.P.C. 19708.

For additional information, please contact Inspector Griffin of the Construction Services Unit at (213) 482-6506.

WILLIAM R. BAMATTRE
Fire Chief

Alfred B. Hernandez, Assistant Fire Marshal
Bureau of Fire Prevention and Public Safety

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c:so calif gas

A-04

Southern California Gas Company®

A Sempra Energy® utility

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October 2, 2003

Mr. Roosevelt Grant
CPUC Environmental Project Manager
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

Re: A.99-05-029 - Comments on Initial Study for Draft Environmental Impact Report for Sale of Surplus Southern California Gas Property at Playa del Rey and Marina del Rey

Dear Mr. Grant:

Southern California Gas Company ("SoCalGas") has reviewed the Initial Study for a draft environmental impact report ("DEIR") concerning the referenced action and, through these comments, wishes to correct some factual inaccuracies and ambiguities.

Initial Study

Page S-1, Section S.2 : The reference to the project area being located 0.5 miles west of Culver City, should be changed to 5 miles southwest of Culver City.

Page S-2, Section S.2, Table 1: The reference of the Well Designation of Cluster #1 as Anglo American should be more accurately referred to as Anglo American Champ #1. This change is consistent with later sections in the document which make reference to the, "Champ" cluster.

Also, with respect to Clusters 10 and 11 being near Calabara Avenue, the correct name of the street is Calabar Avenue.

Page S-7, Section S.3: The sentence "By July 1958, approximately 27 billion cubic feet (bcf) of cushion gas was stored" is either in error or ambiguous. The total capacity of the storage field in 1958 was approximately 7 bcf; it remains at about the same capacity today. If the quoted sentence was intended to mean that 28 bcf of gas had cycled in and out of the field by 1958, then the sentence needs to be rewritten to convey that meaning.

Page S-8, "Conditions of Ownership Transfer": The third sentence in this section, stating that SoCalGas is obligated in perpetuity to mitigate for any potential adverse effects the wells may have on future beneficial uses of the property, is in error. California Public Resources Code, Section 3251.5, provides that if an abandoned well leaks and requires remedial work 15 or more years after it was properly abandoned according to all requirements at the time of abandonment, the state assumes financial responsibility for the remedial work. However, SoCalGas would be responsible for repairing a leaking abandoned well if the SoCalGas storage field activities caused the leakage.

We understand that the CEQA process requires the CPUC to consult with responsible agencies, which must include the Department of Oil, Gas and Geothermal Resources ("DOGGR"). We are confident that DOGGR will be able to assist your understanding of this and other abandoned well issues and will be able to draft any appropriate mitigation measures for the CPUC to adopt in its DEIR.

Page S-10, Section S.5, #9: The reference to the project area being located 0.5 miles west of Culver City, should be changed to 5 miles southwest of Culver City.

Page S-11, Section S.5, #10: The reference to the "County of Los Angeles Sanitation Department", should be changed to the, "Sanitation Districts of Los Angeles County."

Page S-11, "Other public agencies whose approval is required": As clarification, the agencies on this list are not required to approve the proposed project; however, some or all of them may be involved, to varying extents, in any subsequent development of the lots.

Page 16, third paragraph: This paragraph is misleading by saying that, "60 odor complaints concerning the Playa del Rey Storage Field have been filed since 1988." Although we are not familiar with the reference complaints, we believe that many were due to other sources of odor (e.g. sewers, resident activities, etc.).

Page 31: There are several serious inaccuracies or ambiguities on this page with respect to the geologic conditions at the Playa del Rey Storage Field.

The first full paragraph is misleading in its statement that earthquakes can damage wells. While operating oil and gas wells have been reported to have been damaged in earthquakes, SoCalGas is not aware of reports of any damage to abandoned wells due to earthquakes. Operating wells can be damaged more easily because a casing buckle from an earthquake will prevent the well from operating. Abandoned wells are less likely to be damaged in earthquakes for several reasons, including that casings filled with cement are unlikely to buckle. Only abandoned wells are the subject of the pending lot sales.

The second full paragraph reports that the "ETI (2000) soil gas survey results suggest the possible presence of migration pathways from the gas storage reservoir to the ground surface." This statement is both misleading and substantively wrong. The conclusion of

that study, reported in ETI (2001) concluded that there was no connection between the soil gas found in the Playa Vista area and the gas storage reservoir. As a result, the conclusions drawn from this erroneous premise in the Initial Study are also incorrect. This is an important issue and it is critical that the CPUC reread the ETI soil gas survey and correct this error.

Appendix D

Page D-3: reads that the, "Company began operations after acquiring the field in 1953." In fact, SoCalGas began operation of the Playa del Rey Storage Field in 1942, although it did not complete the purchase of the field until 1953.

Appendix F

Page F-5: The second full paragraph states that "Several of these abandoned wells have buildings constructed over or adjacent to them . . .". The context of the paragraph leads the reader to believe that there are only several abandoned wells in the entire Los Angeles basin with that are covered by or adjacent to structures. In fact, there are thousands of abandoned wells below or adjacent to existing structures in the Los Angeles basin.

Page F-7: Please see comment above for page S-7, section S.3, with respect to the storage capacity of the storage reservoir.

Also, the first paragraph under "Types of Gases" instructs that processed natural gas normally has less than 0.1% hydrocarbon components that are heavier than methane. This statement is not accurate for the storage gas and pipeline quality natural gas in general. The natural gas in the Playa del Rey storage field typically has more than 5% hydrocarbons that are heavier than methane. We suspect that the erroneous definition came from a draft 1983 E.P.A. document concerning fugitive natural gas leaks; however, the docket for the final version of this document, completed in 1985, specifies a revised definition of natural gas to 10% VOC (E.P.A.'s use of VOC excludes methane and ethane) in recognition that a 1% limit would exclude pipeline natural gas and other gas streams E.P.A. wished to exempt.

Page F-11: The discussion of the Block 11 well, in paragraph 3, is misleading in that it implies that the biogenic gas leak remains unresolved. That issue was resolved in early 2001 by re-entering and re-cementing the abandoned well. The DOGGR supervised and approved this work.

The fourth paragraph states that the ETI (2000) study could not confirm the presence or absence of storage gas on the Playa Vista property. This is misleading and inflammatory. As correctly reported on page F-7, the ETI (2001), which was a continuation of the ETI (2000) study, confirmed that storage gas was not present on the Playa Vista property.

Page F-12: The last paragraph on this page does not accurately describe the responsibility for naturally occurring gas. Mineral rights ownership conveys the right to produce oil and/or gas from land. California recognizes the "law of capture" with respect to those rights. Pursuant to the "law of capture," oil and gas are not owned until they are reduced to possession. In other words, a mere mineral interest does not subject the owner to liability as long as the owner (a) takes no actions causing, or contributing to, damage another party, and (b) has complied with the laws and regulations of the governmental agencies having jurisdiction over the minerals and operations/activities related thereto.

This fundamental error emphasizes the need for the CPUC to consult and coordinate closely with DOGGR concerning oil and gas issues so that the public is not misled.

SoCalGas appreciates the opportunity to comment on the Notice of Preparation and the Initial Study for Application No. A.99-05-029. SoCalGas recommends that its foregoing comments be recognized as addressing factual inaccuracies in the Initial Study. SoCalGas looks forward to reviewing the draft EIR in the very near future.

Sincerely,

Gregory Healy

Gregory Healy

A-05

Mr. Roosevelt Grant, CPUC
Environmental Project Manager
c/o Environmental Science Associates
225 Bush St., Suite 1700
San Francisco,CA 94104-4207

October 2, 2003

RE: Initial Study for CPUC Application No. 99-05-029 – SOCALGAS Company's Application to Value and Sell Surplus Property

Dear Mr. Grant:

We have the following comments at this time on the Initial Study. We have asked for a hard copy of the Initial Study for more review in the future, as it has been difficult to download the CD in its entirety. Mr. Tim Morgan at ESA stated that we could mail in our comments by October 3rd.

Our comments at this time are the following:

1) We incorporate the information we provided to the CPUC in our previous Motion to Disqualify Environmental Consultants, comments at the Hearing, and documents that were provided following the hearing. We also incorporate the information in our Motion to Disclose SOCALGASCO well records, following documents, and those documents and Minutes from the meeting in Grassroots Offices in Los Angeles with the PUC and ESA earlier this year. We request that those Minutes be adhered to.

The Initial Study excludes some of the points we brought up in that meeting such as the focus is on the surface instead of the whole geological setting of these wells, the geological formation they go into and the effect.

2) It is unacceptable to rely on the Los Angeles City CLA Report. This report repeats the same erroneous scenario that occurred in the Playa Vista EIR of 1992. The City of LA again allowed the developer to hire the majority of consultants (7 out of 9), erasing the independence established in the previous hiring of a Peer Reviewer. Only when there was independence of the City hiring a 3rd Party (ETI) and both parties were allowed to communicate with the Reviewer, did the truth come out about the existence and seriousness of the gas seeps at Playa Vista in April 2000.

The CLA Report had no independent oversight for the protocol standard of review and did not conform to State or Federal protocol standards of review either. The CLA Report is not even done to petroleum engineering standards.

Although it includes the ETI Report of April 2000, the only other company hired by the City was Kleinfelder & Associates who did no new gas sampling for oilfield constituents. They instead relied on data that was incomplete by ETI, and on Playa Capital consultants information, e.g. CDM.

The CLA Report also included consultants now being hired by the CPUC, such as John Sepich.

The CLA Report relies on the First Phase EIR information, and we have a lawsuit pending regarding an SEIR on the gas issue.

The CLA Report was deemed incomplete by the California Department of Toxic Substances Control. They stated that all gas studies need to be performed in native soils (not disturbed), and asked for Human Health Risk and Ecological Assessments based on new gas studies to evaluate the effects of the BTEX chemicals.

A lot of available information was withheld in the CLA Report, leading to a very misleading report. Therefore, the CLA Report SHOULD NOT BE RELIED UPON for anyone's use. It has not been peer reviewed, and in fact would likely fail a peer review. Mixing of natural gases were left out, as well as no native gas samples were submitted.

We may have further comments later, but we submit these for now.

Sincerely,

Patricia McPherson, President
GRASSROOTS COALITION
3749 Greenwood Ave.
Los Angeles, CA 90066
(310) 397-5779

Kathy Knight, Wetlands Coordinator
SPIRIT OF THE SAGE COUNCIL
1122 Oak St.,
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(310) 450-5961

COUNTY OF LOS ANGELES

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ALHAMBRA, CALIFORNIA 91802-1460

October 23, 2003

IN REPLY PLEASE REFER TO FILE: WM-4

Mr. Roosevelt Grant
CPUC Environmental Project Manager
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

Dear Mr. Grant:

RESPONSE TO A NOTICE OF PREPARATION
SALE OF SURPLUS SOUTHERN CALIFORNIA GAS PROPERTY AT
PLAYA DEL REY AND MARINA DEL REY

Thank you for the opportunity to provide comments on the subject document. The proposed document considers environmental impacts from the potential development of 36 lots, all residential use, except for one commercial use. The project site is located approximately 4 miles south of the City of Santa Monica and 1.5 miles north of the Los Angeles International Airport. We have reviewed the submittal and offer the following comments:

Environmental Programs

The Los Angeles County Building Code, Section 110.4 requires that buildings or structures adjacent to or within 200 feet (7620 mm) of active, abandoned or idle oil or gas wells be provided with methane gas protection systems. The project site contains or appears to contain or lie within 200 feet of active, abandoned or idle oil or gas wells. This issue should be addressed and mitigation measures provided. Our Environmental Programs Division must be contacted for issuance of necessary permits.

Should any operation within the subject project include the modification or removal of underground storage tanks, our Environmental Programs Division must be contacted for required approvals and operating permits.

If you have any questions, please contact Mr. Wilson Fong at (626) 458-3581.

Geotechnical and Materials Engineering

The Environmental Impact Report shall address the geotechnical issues identified in the Notice of Preparation/Initial Study.

Description of the project and the associated grading, i.e., existing and proposed grades, etc., must be shown on a topographic map. Also, all geotechnical hazards must be identified and any mitigation measures discussed in detail. The requested information shall be included in the appropriate documents, as requested by others.

The project is located within a mapped potentially liquefiable area, per the State of California Seismic Hazard Zone Map, Venice Quadrangle. However, a liquefaction analysis is not warranted at this time. Detailed liquefaction analyses, conforming to the requirements of the Sate of California Division of Mines and Geology Special Publication 117, must be conducted at the tentative map and/or grading/building plan stages.

If you have any questions, please contact Mr. Amir Alam at (626) 458-4925.

Land Development

Hydrology and Standard Urban Storm Water Mitigation Plan (SUSMP) Review

This report inadequately addresses SUSMP and drainage issues. The environmental document does not provide sufficient information to determine what drainage impacts, if any, the project may have towards area drainage and County facilities (storm drain Project Number 513 and storm drain Project Number 647). To properly assess any drainage and SUSMP impacts and to determine appropriate mitigation, a drainage concept/SUSMP report will be required. We recommend that the applicant prepare a drainage concept/SUSMP report showing the extent of drainage and SUSMP quality impacts, and if necessary, provide mitigation acceptable to the County. The analysis should address increases in runoff, any change in drainage patterns, treatment method proposed for SUSMP regulations, and the capacity of storm drain facilities.

We recommend that this report not be approved until our department has reviewed and approved the drainage concept/SUSMP report. We also recommend that a copy of the drainage concept/SUSMP report, once approved, be included in the environmental document.

If you have any questions, please contact Mr. Michael Hales at (626) 458-4921.

Transportation and Planning

The proposed project will not have any significant impacts on County of Los Angeles Highways.

If you have any questions, please contact Mr. Hubert Seto at (626) 458-4349.

Traffic and Lighting

The proposed project will not have any significant impact to County and County/City roadways in the area. No further information is required.

If you have any questions, please contact Ms. Jennifer Frary at (626) 300-4792.

Watershed Management

The proposed project should include investigation of watershed management opportunities to maximize capture of local rainfall on the project site, eliminate incremental increase in flows to the storm drain system, and provide filtering of flows to capture contaminants originating from the project site.

If you have any questions regarding the above comments or the environmental review process of Public Works, please contact Ms. Massie Munroe at (626) 458-4359.

Very truly yours,

JAMES A. NOYES
Director of Public Works

for ROD H. KUBOMOTO
Assistant Deputy Director
Watershed Management Division

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Southern California Gas Company®

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October 2, 2003

Mr. Roosevelt Grant
CPUC Environmental Project Manager
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

Re: A.99-05-029 - Comments on Initial Study for Draft Environmental Impact Report for Sale of Surplus Southern California Gas Property at Playa del Rey and Marina del Rey

Dear Mr. Grant:

Southern California Gas Company ("SoCalGas") has reviewed the Initial Study for a draft environmental impact report ("DEIR") concerning the referenced action and, through these comments, wishes to correct some factual inaccuracies and ambiguities.

Initial Study

Page S-1, Section S.2 : The reference to the project area being located 0.5 miles west of Culver City, should be changed to 5 miles southwest of Culver City.

Page S-2, Section S.2, Table 1: The reference of the Well Designation of Cluster #1 as Anglo American should be more accurately referred to as Anglo American Champ #1. This change is consistent with later sections in the document which make reference to the, "Champ" cluster.

Also, with respect to Clusters 10 and 11 being near Calabara Avenue, the correct name of the street is Calabar Avenue.

Page S-7, Section S.3: The sentence "By July 1958, approximately 27 billion cubic feet (bcf) of cushion gas was stored" is either in error or ambiguous. The total capacity of the storage field in 1958 was approximately 7 bcf; it remains at about the same capacity today. If the quoted sentence was intended to mean that 28 bcf of gas had cycled in and out of the field by 1958, then the sentence needs to be rewritten to convey that meaning.

Page S-8, "Conditions of Ownership Transfer": The third sentence in this section, stating that SoCalGas is obligated in perpetuity to mitigate for any potential adverse effects the wells may have on future beneficial uses of the property, is in error. California Public Resources Code, Section 3251.5, provides that if an abandoned well leaks and requires remedial work 15 or more years after it was properly abandoned according to all requirements at the time of abandonment, the state assumes financial responsibility for the remedial work. However, SoCalGas would be responsible for repairing a leaking abandoned well if the SoCalGas storage field activities caused the leakage.

We understand that the CEQA process requires the CPUC to consult with responsible agencies, which must include the Department of Oil, Gas and Geothermal Resources ("DOGGR"). We are confident that DOGGR will be able to assist your understanding of this and other abandoned well issues and will be able to draft any appropriate mitigation measures for the CPUC to adopt in its DEIR.

Page S-10, Section S.5, #9: The reference to the project area being located 0.5 miles west of Culver City, should be changed to 5 miles southwest of Culver City.

Page S-11, Section S.5, #10: The reference to the "County of Los Angeles Sanitation Department", should be changed to the, "Sanitation Districts of Los Angeles County."

Page S-11, "Other public agencies whose approval is required": As clarification, the agencies on this list are not required to approve the proposed project; however, some or all of them may be involved, to varying extents, in any subsequent development of the lots.

Page 16, third paragraph: This paragraph is misleading by saying that, "60 odor complaints concerning the Playa del Rey Storage Field have been filed since 1988." Although we are not familiar with the reference complaints, we believe that many were due to other sources of odor (e.g. sewers, resident activities, etc.).

Page 31: There are several serious inaccuracies or ambiguities on this page with respect to the geologic conditions at the Playa del Rey Storage Field.

The first full paragraph is misleading in its statement that earthquakes can damage wells. While operating oil and gas wells have been reported to have been damaged in earthquakes, SoCalGas is not aware of reports of any damage to abandoned wells due to earthquakes. Operating wells can be damaged more easily because a casing buckle from an earthquake will prevent the well from operating. Abandoned wells are less likely to be damaged in earthquakes for several reasons, including that casings filled with cement are unlikely to buckle. Only abandoned wells are the subject of the pending lot sales.

The second full paragraph reports that the "ETI (2000) soil gas survey results suggest the possible presence of migration pathways from the gas storage reservoir to the ground surface." This statement is both misleading and substantively wrong. The conclusion of

that study, reported in ETI (2001) concluded that there was no connection between the soil gas found in the Playa Vista area and the gas storage reservoir. As a result, the conclusions drawn from this erroneous premise in the Initial Study are also incorrect. This is an important issue and it is critical that the CPUC reread the ETI soil gas survey and correct this error.

Appendix D

Page D-3: reads that the, "Company began operations after acquiring the field in 1953." In fact, SoCalGas began operation of the Playa del Rey Storage Field in 1942, although it did not complete the purchase of the field until 1953.

Appendix F

Page F-5: The second full paragraph states that "Several of these abandoned wells have buildings constructed over or adjacent to them . . .". The context of the paragraph leads the reader to believe that there are only several abandoned wells in the entire Los Angeles basin with that are covered by or adjacent to structures. In fact, there are thousands of abandoned wells below or adjacent to existing structures in the Los Angeles basin.

Page F-7: Please see comment above for page S-7, section S.3, with respect to the storage capacity of the storage reservoir.

Also, the first paragraph under "Types of Gases" instructs that processed natural gas normally has less than 0.1% hydrocarbon components that are heavier than methane. This statement is not accurate for the storage gas and pipeline quality natural gas in general. The natural gas in the Playa del Rey storage field typically has more than 5% hydrocarbons that are heavier than methane. We suspect that the erroneous definition came from a draft 1983 E.P.A. document concerning fugitive natural gas leaks; however, the docket for the final version of this document, completed in 1985, specifies a revised definition of natural gas to 10% VOC (E.P.A.'s use of VOC excludes methane and ethane) in recognition that a 1% limit would exclude pipeline natural gas and other gas streams E.P.A. wished to exempt.

Page F-11: The discussion of the Block 11 well, in paragraph 3, is misleading in that it implies that the biogenic gas leak remains unresolved. That issue was resolved in early 2001 by re-entering and re-cementing the abandoned well. The DOGGR supervised and approved this work.

The fourth paragraph states that the ETI (2000) study could not confirm the presence or absence of storage gas on the Playa Vista property. This is misleading and inflammatory. As correctly reported on page F-7, the ETI (2001), which was a continuation of the ETI (2000) study, confirmed that storage gas was not present on the Playa Vista property.

Page F-12: The last paragraph on this page does not accurately describe the responsibility for naturally occurring gas. Mineral rights ownership conveys the right to produce oil and/or gas from land. California recognizes the "law of capture" with respect to those rights. Pursuant to the "law of capture," oil and gas are not owned until they are reduced to possession. In other words, a mere mineral interest does not subject the owner to liability as long as the owner (a) takes no actions causing, or contributing to, damage another party, and (b) has complied with the laws and regulations of the governmental agencies having jurisdiction over the minerals and operations/activities related thereto.

This fundamental error emphasizes the need for the CPUC to consult and coordinate closely with DOGGR concerning oil and gas issues so that the public is not misled.

SoCalGas appreciates the opportunity to comment on the Notice of Preparation and the Initial Study for Application No. A.99-05-029. SoCalGas recommends that its foregoing comments be recognized as addressing factual inaccuracies in the Initial Study. SoCalGas looks forward to reviewing the draft EIR in the very near future.

Sincerely,

Gregory Healy

Gregory Healy