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## Section 3.6 Groundwater and Soils

3 **SECTION SUMMARY**

4 This section characterizes the existing groundwater and soil conditions in the proposed Project area and  
5 assesses how the construction and operation of the proposed Project would impact the existing conditions.  
6 This evaluation analyzes the impacts that proposed Project construction and operation would have on  
7 groundwater and surface soils at the Project site. The primary features of the proposed Project that could  
8 affect these resources include the demolition and removal of obsolete infrastructure and structures,  
9 construction of new facilities, installation of new infrastructure or improvements to existing infrastructure,  
10 and dredging activities in Fish Harbor for use in the creation of new landfill totaling 0.9 acre. Potential  
11 impacts to surface water and marine water quality (including the potential impacts associated with the  
12 excavation of marine sediment during dredging) are addressed in Section 3.13, Water Quality, Sediments,  
13 and Oceanography. An analysis of potential impacts on groundwater and soils associated with the  
14 alternatives is detailed in Chapter 6, Analysis of Alternatives.

15 Section 3.6, Groundwater and Soils, provides the following:

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- 17 • A description of the existing environmental setting in the Port area, including groundwater and  
18 soil conditions;
  - 19 • A description and summary of findings from previous site assessments, remedial action plans,  
20 and soil and groundwater investigations;
  - 21 • A description of potential site contamination;
  - 22 • A description of applicable local, state, and federal regulations and policies regarding hazardous  
23 materials or hazardous substances that may require special handling if encountered in soil or  
24 groundwater during construction of the proposed Project;
  - 25 • A discussion on the methodology used to determine whether the proposed Project would result in  
26 impacts to groundwater or soil resources;
  - 27 • An impact analysis of the proposed Project; and
  - 28 • A description of any proposed mitigation measures that would reduce potential impacts, if  
29 applicable.

29 **Key Points of Section 3.6:**

30 The proposed Project would expand an existing boat repair shop, and future operations would be  
31 consistent with those currently performed at the site, as well as adjacent uses in the Project area.

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1 All impacts were determined to result in a less than significant level or no impact, as identified below:

- 2 • The proposed Project construction activities may encounter toxic substances or other contaminants  
3 associated with historical uses of the Port, resulting in short-term exposure (duration of  
4 construction) to construction/operations personnel and/or long-term exposure to future site  
5 occupants. However, the proposed Project would handle, transport, remediate, and/or dispose all  
6 contaminated soil in accordance with all applicable federal, state, and local laws and regulations and in  
7 accordance with the regulatory lead agency (e.g., DTSC, Los Angeles RWQCB) and the LAHD's Site  
8 Remediation and Contamination Contingency Plan Lease Requirements (**LM GW-1** and **LM GW-2**).
- 9 • The construction and operation of the proposed Project would not result in expansion of the area  
10 affected by contaminants.
- 11 • The construction and operation of the proposed Project would not result in a change to potable  
12 water levels.
- 13 • The proposed Project would not contribute to groundwater contamination; nor would it reduce  
14 existing groundwater recharge capacity or potable water levels.
- 15 • The proposed Project would not result in violation of regulatory water quality standards at an  
16 existing production well.

## 3.6.1 Introduction

This section describes the affected environment and regulatory setting for groundwater and soils in the Project area, as well as the impacts on groundwater and soils that would result from the proposed Project, and any mitigation measures that would reduce these impacts.

## 3.6.2 Environmental Setting

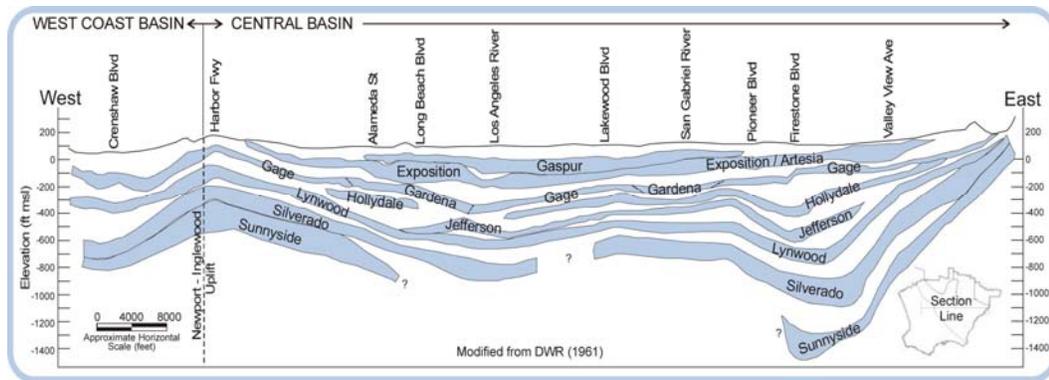
The environmental setting with respect to potential environmental concerns for soil and groundwater beneath the Project site is based on historical development, past subsurface investigations and site assessments completed specifically for the ALBS site or adjacent areas, and the Water Resources Action Plan (POLA/POLB, 2009).

The proposed Project site is located at Berth 258 on Terminal Island near sea level, within a commercial/industrial area in the Fish Harbor and Pier 300 Channel region of the Port. Terminal Island is a flat, almost entirely man-made formation that was once a sand bar called Rattlesnake Island. The tremendous development of the area was a combination of, completion of the Panama Canal (1914), discovery of oil at Signal Hill (1921), and the development of the petroleum industry in general. The land area was increased by placement of fill beginning at the turn of the century.

The ALBS has been in operation at its current location as a boat manufacturing and repair yard since 1923, and the majority of the buildings or structures were built between 1924-1947 (SWRCA, 2009). The Project site is underlain by artificial fill material of varying depths. A great majority of these fill materials were placed as spoils from various dredging operations that occurred prior to 1915 (Port of Los Angeles, 1979). The fill material is predominantly composed of loose, fine-grained sand and silt fill down to approximately an elevation of -50 feet, where firmer natural soils consisting of dense to very dense sand are found (ALBS FEIR, 1974).

### 3.6.2.1 Groundwater

The proposed Project site is located within the West Coast Basin of the Los Angeles Coastal Groundwater Basin (refer to Figure 3.6-1), in the Los Angeles-Long Beach Harbor portion of Hydrologic Unit Code 18070104 (USEPA, 2011). The West Coast Basin underlies approximately 140-160 square miles in the southwestern part of the coastal plain of Los Angeles County, and is generally bounded on the west by Santa Monica Bay, on the north by Ballona Escarpment, on the east by the Newport-Inglewood Uplift, and on the south by San Pedro Bay and the Palos Verdes Hills. The major aquifers in the West Coast Basin include the following, from shallowest to deepest: 1) Gage; 2) Lynwood; 3) Silverado; and, 4) Sunnyside. These major aquifers, in addition to others in the Los Angeles Coastal Groundwater Basin, are used for industrial and municipal water supply outside of the harbor area (Water Replenishment District of Southern California, 2004).



Source: California Department of Water Resources (CDWR), 1961(primary source); Water replenishment District, 2004 (secondary source).

**Figure 3.6-1. Groundwater Aquifers in the West Coast and Central Basins**

Aquifers in the West Coast Basin are generally confined and receive the majority of their natural recharge, or replenishment from adjacent groundwater basins (underflow from the Central Basin) or from the Pacific Ocean (seawater intrusion). Water spread in the Central Basin percolates into aquifers there, and eventually some groundwater crosses the Newport-Inglewood Uplift to replenish the groundwater in the West Coast Basin. Although the recharge water is not directly applied to the West Coast Basin, the recharge process returns large quantities of water to the ground and substantially increases natural subsurface flow from the Central Basin to the West Coast Basin.

In the West Coast Basin, there are 69 active extraction wells, 53 inactive extraction wells, 247 injection wells, and 557 observation wells. One new well was completed and zero wells were reported as destroyed during the reporting period of July 1, 2009 through June 30, 2010 (CDWR, 2010).

Groundwater depth is not currently available for the Project site; however, reports related to adjacent sites such as the Southwest Marine Terminal (Berth 240 or 240Z) located at 985 S. Seaside Avenue, Mobil Southwest/ExxonMobil Terminal (Berths 238-240C) located at 799 S. Seaside Avenue, and ExxonMobil/General Petroleum (Berths 258-259) located at 1028 S. Seaside Avenue, have reported groundwater depths for the vicinity (i.e., within 1,000 feet of the Project site). Groundwater beneath the adjacent Southwest Marine Terminal has been recorded at depths ranging from 6 to 8.5 feet below ground surface (feet bgs) (POLA, 2006). There are currently 16 groundwater monitoring wells at the ExxonMobil site (SWRCB, 2011).<sup>1</sup> Groundwater depth recorded at these monitoring wells range from 7.4 to 11.2 feet bgs. The groundwater beneath the ExxonMobil/General Petroleum facility has varied from 3 to 8 feet bgs, depending on the recent rainfall infiltration rates. It is a mixture of brackish groundwater in the Bellflower Aquiclude and salt water from the Pacific Ocean (details regarding this site – which shares the northern boundary of the proposed Project site – are in Section 3.6.2.4). These depths, as well as gradient and flow direction, is subject to variation as a result of tidal influences. Because

<sup>1</sup> Data are currently available through the SWRCB's GeoTracker database system available at <http://geotracker.swrcb.ca.gov/search.asp>. Data can be queried by searching the Global ID No. for the Southwest Marine Terminal (SL092513) and the ExxonMobil Terminal (SL204701660).

1 the Project site is paved (impermeable), there is a low potential for infiltration of surface  
2 runoff.

3 The Project site is currently paved with impermeable surface materials (i.e., concrete or  
4 asphalt). However, spills of petroleum products, hazardous substances, and/or deposition  
5 of sandblast grit as a result of site operations may have resulted in contamination of some  
6 surface soils and shallow groundwater. No potable water wells are located in vicinity of  
7 the Project site due to potential saltwater intrusion from the Pacific Ocean. Groundwater  
8 beneath the Project site is not considered potable water, and likely would not be  
9 considered a potable or beneficial water source in the future, based on Los Angeles  
10 Regional Water Quality Control Board (Los Angeles RWQCB) Resolution No. 98-018,  
11 dated November 2, 1998, which designated the West Coast Basin groundwater  
12 underlying portions of the Port Complex as non-potable (RWQCB, 1994 [as amended]).  
13 Drinking water is provided to the area by the City of Los Angeles Department of Water  
14 and Power (LADWP).

15 The LADWP is the current supplier of water supplied to the Port area. The LADWP  
16 obtains water supply for the Los Angeles area from three major sources: (1) The Owens  
17 Valley and the Mono basin on the east side of the Sierra Nevada Mountains via the Los  
18 Angeles Aqueduct; (2) Northern California and Colorado River imports from MWD; and  
19 (3) Local groundwater basins, including the San Fernando, Sylmar, Central Coast and  
20 West Coast Basins. No groundwater wells were identified within a 2-mile radius of the  
21 Project site.

### 22 3.6.2.2 Soil Conditions

23 Prior to development of the Los Angeles Harbor, extensive estuarine deposits were  
24 present at the mouth of Bixby Slough, Dominguez Channel, and the Los Angeles River.  
25 The organic tidal muds were dredged extensively and mostly covered with artificial fill  
26 (USACE and LAHD, 2007). Underlying the surface soils of the West Coast Basin (which  
27 includes the Project site) are subsurface soils consisting of dredged fill material,  
28 underlain by naturally deposited alluvial sediments that overlay the Malaga mudstone  
29 formation. Dredge fill and natural alluvial sediments represent a mix of soil types,  
30 predominantly unconsolidated layer of soft-to-hard clays and silts, with sandy soils  
31 present in some areas to depths of 30 feet.

32 The Malaga mudstone is the uppermost layer of the Monterey shale formation in the  
33 San Pedro area (USACE and LAHD, 2007). Malaga mudstone is classified as hard to  
34 very hard elastic silt by the Unified Soil Classification System and is a relatively soft  
35 material by geologic bedrock descriptions. Project site soils also could contain expansive  
36 soils from clay minerals and imported fill materials (USACE and LAHD, 2007).  
37 Expansive soils expand in volume when saturated and shrink when dry. Expansive soils  
38 are common in the geologic units in the Palos Verdes Peninsula.

39 Given the historic industrial development in the area, corrosive soils also could be present  
40 in the area. Corrosive soils result from the presence of high moisture content, high  
41 electrical conductivity (the ability to pass electrical current), high acidity, and high  
42 dissolved salts. These conditions result in the flow of electrical current between the soil  
43 and metallic materials, such as tanks, pipelines, and other objects in contact with the soil.  
44 This flow of electrical current results in corrosion of the metallic objects unless they are  
45 made of, or protected by, corrosion-resistant materials.

### 3.6.2.3 Soil and Groundwater Investigations Associated with the Project Site

The following section summarizes the environmental setting for the Project site within the boundaries of the existing ALBS. Site conditions including any on-site contamination, impacts to soil and groundwater, and remediation activities are summarized from various environmental assessments and hazardous materials evaluation reports conducted for the Project site. Site conditions described herein and in the referenced reports are representative of the baseline conditions for determining the significance of impacts.

#### 3.6.2.3.1 Preliminary Site Assessment

A Phase I Preliminary Site Assessment (PSA) was conducted for the ALBS site by Tetra Tech, Inc. in 1993-1994 (Tetra Tech, Inc, 1994). The PSA covered the existing ALBS at Berth 258, which consisted of nine parcels (six land parcels and three water parcels).<sup>2</sup> The database file review indicated that the ALBS site was not listed with federal, state, or local regulatory agencies for violations or enforcement actions. However, the ALBS site was identified as a Resource Conservation and Recovery Act (RCRA) small quantity generator (SQG) site and was included on the Hazardous Waste Information System (HWIS) database.

The site inspection and documentation review found that the assessed property might have potential environmental liabilities due to poor environmental safety practices and inadequate site conditions. Soil or sediment in the unlined marine railways and around the capped clarifier in the machine shop may have been impacted by contamination as a result of direct contact with the waste materials (sandblast waste, oils, paints, and solvents). The preliminary asbestos survey identified the linoleum flooring material in the downstairs office area of the main building as positive ACBM. The total ACBM affected area (within the Office/Workshop Complex - Buildings A1, A2, and A3) was estimated to be approximately 672 sq ft. The PSA concluded that these materials were categorized as Class I non-friable ACBM and were not likely to cause any immediate health concerns for the employees. The PSA recommended to leave the flooring material in-place and monitored through an O&M plan with a routine inspection schedule to ensure that the integrity and status of the materials have not changed. The PSA also recommended that all identified Class I ACBM should be abated by a qualified asbestos abatement contractor prior to any physical disturbance or demolition of the buildings.

#### 3.6.2.3.2 ALBS Site Characterization Report

Mesa Environmental Services conducted a site characterization of the ALBS in November 1997 (Mesa, 1998). The scope of the site characterization was to determine the subsurface condition and potential impact from past operations of the site. Fourteen sampling locations were established including eight soil borings, four sediment grabs, and two grabs of spent sandblast grit. The sediment samples were collected at low tide from approximately one foot below the surface. The spent sandblast grit samples were taken from immediately below the surface of the spent sand blast grit pile. Soil samples were collected from both shallow subsurface, approximately one foot bgs, and subsurface, three to five feet bgs.

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<sup>2</sup> The existing ALBS still consists of nine parcels (six land and three water); however, since the PSA was conducted, Seaside Avenue has been realigned approximately feet to the west of the ALBS site.

1 The results indicated that the northern and southern portions of the site exhibit elevated  
2 heavy metal concentration including lead, copper, zinc, and tin. Elevated polynuclear  
3 aromatic hydrocarbons (PAHs) were also detected throughout the site. Detected  
4 polychlorinated biphenyls (PCB) concentrations were at low to non-detect levels. In  
5 general, these types of pollutants are consistent with the operational history of the ALBS  
6 site and adjacent operations along Seaside Avenue and around Fish Harbor.

7 One soil sample (northern most extent of the site) collected from 4.5 feet bgs contained  
8 elevated levels (27,000 ppm) of total petroleum hydrocarbons (TPH) (C4-C35). Field  
9 observation also indicated that hydrocarbon product was present on top of the  
10 groundwater in this sampling location. This isolated TPH detection was not consistent  
11 with the current or historical use of the location.

12 Given the isolated but significant hydrocarbon (TPH) contamination identified at one  
13 sample location and the activities undertaken at the ExxonMobil/General Petroleum (a  
14 fuel depot and dock) to the north of ALBS it was recommended that at a minimum,  
15 results from recent soil borings or groundwater well monitoring associated with the  
16 ExxonMobil/General Petroleum site be reviewed (details associated with the  
17 ExxonMobil/General Petroleum site are in the following section - Section 3.6.2.4).

18 Since the ALBS facility was paved with impervious material (i.e., concrete or asphalt),  
19 the report determined that the materials beneath the surface have been encapsulated.  
20 Though there were established, successful techniques for remediating areas affected by  
21 floating product, no one technique for remediating the plume, partially described in the  
22 report, was recommended. Given the lack of information concerning contamination of  
23 surrounding areas and the potential for sources other than ALBS to have, at a minimum,  
24 contributed to the contamination described in the report no remedial actions were  
25 proposed.

26 Based on their review of the site investigation, the LAHD submitted their comments to  
27 ALBS in a letter dated February 1, 1999. In the correspondence, the LAHD agreed that  
28 there appeared to be wide distribution of contamination across the ALBS site, but  
29 disagreed with the statement that "this contamination may not be specifically attributed  
30 by ALBS individually but that it is a part of a larger scenario of general contamination  
31 along Seaside Avenue and within Inner Fish Harbor". The letter indicated that although  
32 there might be regional problems with PCBs and pesticides in the sediments of Inner Fish  
33 Harbor, it did not change the fact that ALBS was responsible for the contamination  
34 caused by its operations. The LAHD's concerns for this facility were not only the  
35 existing contamination, but also lack of preventative measures or operational controls to  
36 reduce or eliminate the sources of contamination that continue to degrade the water and  
37 sediment quality of the Port. The letter also pointed out that many of the metals detected  
38 (i.e., arsenic, copper, lead) exceeded the Total Threshold Limit Concentrations (or  
39 TTLCs) and may also exceed the Soluble Threshold Limit Concentrations (STLCs) or  
40 Toxicity Characteristics Leaching Potential (TCLP) criteria. This could result in the  
41 soils/sediments being classified as a California State Regulated Hazardous Waste or  
42 Federal Regulated Hazardous Waste. Additionally, there may be a health and safety  
43 concern regarding chronic worker exposures to high levels of carcinogenic metals.

### 3.6.2.3.3 Remedial Action Plan (2001)

On behalf of the ALBS, Environmental Protection and Compliance Inc (EPCI) prepared a Remedial Action Plan (RAP), as part of the Portwide effort to address environmental issues in November 2001 (EPCI, 2001). The objectives of the Portwide effort was to: 1) remediate or relieve existing conditions that are impacting, or have the immediate potential of impacting the environment; and 2) remediate or establish a RAP at locations where conditions exist that would impact future use or site development by the Port.

Environmental issues, as determined by previous site assessments/characterization reports, that were identified in the RAP include: TPH, PCBs, heavy metals (i.e., lead, copper, zinc), and the storage of spent sandblast grit. Upon further investigation, it was determined that the source of the TPH soil contamination was off site, and the LAHD concluded that ALBS was not responsible for the remediation of the TPH. In addition, based on past and current operational activities at the site, ALBS was determined unlikely to be the source of PCB contamination.<sup>3</sup>

At the time the RAP was prepared, the Port indicated that the containment and control of spent sandblasting grit was of immediate concern. Specifically, the concern was related to the deposition of sandblast grit on the railways and containment within the sandblasting booth and storage area of the ALBS. The RAP identified the exposed soil at the railways and the near-site marine sediments and rocks containing deposits of spent sandblast grit as an environmental concern, and suggested actions to mitigate such impacts, including: 1) vacuum these areas to remove as much grit as possible; and, 2) encapsulate, with concrete, the exposed soil at the railways. The heavy metal soil contamination was considered a low-level environmental threat and a low to moderate toxicity due to the concentrations identified during the site characterization in 1997 (Mesa, 1998). In addition, these soils are relatively immobile to air or groundwater, due to non-liquid, low volatility and low leachability contaminants.

Considering the development of the ALBS site may involve construction of foundations into soils with high ground water, the number of remedial technology alternatives is limited. Although a comprehensive range of remedies was considered in the RAP, due to technical or procedural issues all remedies except for off-site disposal were rejected. Therefore, the RAP recommended excavation and off-site disposal of approximately 7,571 cy of contaminated soil.

### 3.6.2.4 Soil and Groundwater Investigations Associated with the Adjacent Site

The property at the northern boundary of the ALBS facility has primarily operated as a marine fueling station since the 1940s. The property is leased by ExxonMobil from the Port and operated by General Petroleum Resources (hereafter referred to as ExxonMobil/General Petroleum). The following section summarizes various environmental assessments/reports conducted for the ExxonMobil/General Petroleum Facility (historically known as the GP site, but hereafter referred to as the ExxonMobil/GP site) located adjacent to, and to the north of, the Project site.

<sup>3</sup> The RAP noted that the fill used for developing the site was deposited prior to the commercial development of PCBs. One potential source of the PCBs may be the once significant amount of stormwater that flowed across the property from the operation directly across and up gradient of the ALBS facility.

#### 3.6.2.4.1 Site Assessment Program – General Petroleum Facility, Port of Los Angeles

In 1990, as part of the lease renewal process between ExxonMobil (then Mobil Oil Corporation) and the LAHD, a Work Plan was prepared for the ExxonMobil/GP site (Harding Lawson Associates, 1990). The Work Plan laid out a program to install and develop observation wells, take groundwater samples, as well as soil boring samples throughout the site. In addition, an aquifer evaluation (including water-level measurements, monitoring and slug tests) was also planned as part of the site assessment program. This site assessment program was designed to confirm the presence or absence of hydrocarbons in soil and groundwater at the site from facility operations, and, if found, assess the nature and extent of the hydrocarbons.

#### 3.6.2.4.2 Work Plan for Interim Remedial Action

A Work Plan for Interim Remedial Action was prepared by Environmental Resources Management-West Inc (ERM) and submitted to the Port and RWQCB for the overexcavation and post excavation sampling at the ExxonMobil/GP site (ERM, 2008). The proposed area of excavation was estimated to be approximately 1,750 sq ft and total approximately 350 cy of soil and bounded by the aboveground storage tank (AST) containment area and concrete walls. Soil sampling was conducted in the vicinity of the excavation in order to profile the excavated soils for disposal and provide additional characterization and design data for future remediation at the site. In particular, soil samples were proposed to determine if total petroleum hydrocarbons as gasoline (TPH-g) and diesel fuel (TPH-d), as well as volatile organic compounds (VOCs), were remaining in the subsurface.

#### 3.6.2.4.3 Soil, Soil Vapor, and Groundwater Site Assessment Summary and Additional Investigation Work Plan

In 2009, a summary of previous monitoring and sampling activities and a Work Plan for further characterization of the ExxonMobil/GP site was prepared for the Los Angeles RWQCB (ERM, 2009a). The assessment included potential areas that may require additional soil, soil vapor, and groundwater investigation, and to provide a description of the technical approach and methodologies for implementation of additional investigation.

#### 3.6.2.4.4 Remedial Action Plan (RAP) for the General Petroleum Resources Facility

A RAP was prepared for the ExxonMobil/GP site located along the northern boundary of the Project site (ERM, 2009b). The purpose of the RAP was to provide the details of the source removal and soil remediation strategy to be implemented at the site, and on portions of the ALBS site to the south, to mitigate the petroleum hydrocarbon impacts to soil and groundwater. The site has operated as a marine fueling station since the 1940s. Fuel and oil storage tanks are located in the southern portion of the ExxonMobil/GP site, adjacent to the ALBS site, and include the following: five 20,000-gallon ASTs for fuel storage; three ASTs for lubricating oil, and; one gasoline vehicle fuel station/island. According to the RAP, a site investigation conducted in 1991 indicated that the subsurface soil at the site was impacted by petroleum hydrocarbons. Total petroleum hydrocarbon (mostly diesel range) concentrations were detected up to 66,000 mg/kg in site soils. An ongoing quarterly groundwater monitoring sampling program began in 2001 at the site. The RAP identified aromatic hydrocarbons (i.e. BTEX) and fuel additives associated with gasoline and diesel fuels such as methyl tertiary butyl ether

1 (MTBE), tertiary butyl alcohol (TBA), and lead as chemical of concerns (COCs). The  
2 strategy outlined in the RAP incorporated limited vadose zone soil excavation, in situ  
3 remediation via biosparging, bioventing, soil vapor extraction (SVE), and limited *in-situ*  
4 chemical oxidation (ISCO).

#### 5 **3.6.2.4.5 Supplemental Remedial Action, Limited In Situ Chemical Oxidation**

6 A Supplemental RAP was prepared to provide the details of the revised strategy  
7 including the use of limited ISCO and the revised excavation extent targeting the diesel  
8 area at the southeast corner of the ExxonMobil/GP site (ERM, 2011a). The supplemental  
9 RAP presented a summary of the screening of four oxidants considered for the limited  
10 ISCO and provided an overview of the selected oxidant, calcium peroxide, which  
11 included chemistry, a comparison of efficacy, application, availability, generation of by-  
12 products, and safety. The supplemental RAP selected activated sodium persulfate as the  
13 most effective oxidant to treat hydrocarbon contamination, and indicated that, the  
14 implementation of the ISCO at the ExxonMobil/GP site would be conducted in  
15 accordance with the RWQCB's general WDR.

#### 16 **3.6.2.4.6 Draft Comprehensive Site Investigation and First Quarter 2011** 17 **Groundwater Monitoring Report**

18 ERM completed a combined Draft Comprehensive Site Investigation and First Quarter  
19 2011 Groundwater Monitoring for the ExxonMobil/GP site (ERM, 2011b). The overall  
20 objective of the site investigation was to confirm the presence of and further delineate,  
21 where feasible, the extent of impacted soil, soil vapor, and groundwater at the site and to  
22 satisfy the comments of the Los Angeles RWQCB. The report indicated that the Los  
23 Angeles RWQCB and LAHD would review the applicability of the RAP based on the site  
24 investigation data.

25 The specific objective of the soil investigation was to further delineate the extent of lead  
26 along Seaside Avenue and Diesel and Gasoline Range Organics (DRO and GRO,  
27 respectively) contamination identified to date, but undelineated in the southwest and  
28 southeast corners of the ExxonMobil/GP site. The investigation included two soil  
29 sampling locations in northernmost area of the ALBS site. Lead was detected in both  
30 locations at concentrations ranging between 40 to 7,900 mg/kg. Highest lead  
31 concentration was detected at 4.5 feet bgs in the sample location that was adjacent  
32 (west/land side) of Building D. Diesel Range Organics (DRO) was also detected at this  
33 location (4.5 feet bgs) at a concentration of 4,300 mg/kg. The report concluded that the  
34 elevated DRO within the ALBS site identified adjacent to the former railway line which  
35 could be a source of diesel in soil.

36 No soil vapor data was collected at locations within the ALBS site. The specific  
37 objective of the soil vapor component of this investigation was to generate analytical data  
38 to facilitate assessment of the potential threat to human health from intrusion of volatile  
39 organic compounds (VOCs) into indoor air. The soil vapor results indicated that the  
40 detected compounds do not present a significant risk to human health given that there are  
41 no structures with the potential for indoor air impacts within the radius of the inferred  
42 extent of these concentrations

43 In addition to the collection of soil and soil vapor samples, site groundwater monitoring  
44 wells (MWs) were sampled during the first quarter of 2011. Four of these wells were

1 installed in 2007 at the northern area of the ALBS site, near Buildings D and C1  
2 (between the buildings and the buildings and the pier).

3 The first quarter 2011 groundwater sampling event identified dissolved GRO, DRO,  
4 benzene, MTBE, and naphthalene in groundwater exceeding the adopted screening  
5 levels. Dissolved GRO, DRO, and MTBE concentrations were detected in one well  
6 (located between Building D and the pier) at concentrations of 270, 5,700, and 16 ug/L,  
7 respectively.

8 Overall, no new constituents of concern were identified during the broad laboratory  
9 analysis screens conducted as part of this site investigation. The report concluded that  
10 the concentrations of constituents of concern such as DRO, GRO, benzene, and MTBE in  
11 soil and groundwater were within the range of treatability for the methods outlined in the  
12 2009 RAP.

### 13 **3.6.2.4.7 2011 Work Plan and RAP Addendum**

14 A Work Plan and RAP addendum for ExxonMobil/General Petroleum site (ERM,  
15 2011c). The objectives of this document were: 1) complete the characterization (lateral  
16 and vertical extent) of contamination at the ExxonMobil/GP site pursuant to CWC  
17 Sections 13267 and 13304 Orders; and, 2) update the scope of RAP activities based on  
18 the 2011 Draft Comprehensive Site Investigation (Section 3.6.2.4.6 above).

19 According to the Work Plan, COCs in soil were not fully delineated during the 2011 site  
20 investigation. The Work Plan proposed additional soil boring to delineate TPH to the  
21 north of the fuel storage area. It was not proposed to install further borings to the west or  
22 south as there may be overlapping sources from the former rail tracks and the ALBS.  
23 Concentrations to the west could not be further delineated due to the presence of fill  
24 associated with the railway line, or to the east due to the sea wall and harbor. The Work  
25 Plan also proposed to install and sample two additional groundwater monitoring wells to  
26 delineate GRO, DRO, MTBE and benzene concentrations across the northern side of the  
27 plume. The Work Plan did not identify any soil gas data gap. Based on the 2011  
28 investigation results, the proposed strategy to achieve site closure in 2009 RAP was  
29 revised, such as proposing the installation of several biovent/biosparge wells within the  
30 ALBS site.

### 31 **3.6.2.4.8 Conclusion Regarding Soil Contamination Issues**

32 Contamination and remediation of the landside portions of the Project site have been  
33 addressed in the ALBS facility RAP and the ExxonMobil/GP site RAP. Due to access  
34 and operation restrictions, implementation of the RAP associated with the Project site  
35 will occur as part of the phases associated with construction of the proposed Project.  
36 Remediation and closure of the site prior to placement of fill will require regulatory  
37 oversight by the Los Angeles RWQCB or the California Department of Toxic Substances  
38 Control (DTSC), under oversight and approval of the LAHD, and coordination with  
39 ExxonMobil/General Petroleum.

### 40 **3.6.2.5 Potential Site Contamination**

41 As detailed in Section 3.7, Hazards and Hazardous Materials (beginning in Section  
42 3.7.2.2), readily available and reasonably ascertainable federal, state, tribal, and local  
43 government agency records using a regulatory records database report provided by

1 Environmental Data Resources, Inc. (EDR) were reviewed (EDR, 2010). A copy of the  
2 EDR database executive summary is included in Appendix E2 and a brief summary of the  
3 EDR results is provided in Section 3.7, Hazards and Hazardous Materials. Review of the  
4 EDR did not identify any potential soil and groundwater concern associated with the  
5 Project site.

### 6 **3.6.3 Applicable Regulations**

7 As detailed in Section 3.7, Hazards and Hazardous Materials, applicable federal, state,  
8 and local laws each contain lists of hazardous materials or hazardous substances that may  
9 require special handling if encountered in soil or groundwater during construction of the  
10 proposed Project. These include “hazardous substances” under the Comprehensive  
11 Environmental Response, Compensation, and Liability Act of 1980 and the state  
12 Hazardous Substances Account Act (Health and Safety Code Sections 25300, et seq.);  
13 “hazardous materials” under Health and Safety Code Section 25501, California Labor  
14 Code Section 6380 and CCR Title 8, Section 339; “hazardous substances” under 40 CFR  
15 Part 116; and, priority toxic pollutants under CFR Part 122. In addition, “hazardous  
16 materials” are frequently defined under local hazardous materials ordinances, such as the  
17 Uniform Fire Code.

18 Generally speaking, “hazardous materials” means any material that, because of its  
19 quantity, concentration, or physical or chemical characteristics, poses a significant  
20 present or potential hazard to human health and safety or to the environment if released  
21 into the workplace or the environment. Hazardous materials that are commonly found in  
22 soil and groundwater include petroleum products, fuel additives, heavy metals, and  
23 volatile organic compounds. Hazardous substances are defined by State and Federal  
24 regulations as substances that must be regulated in order to protect the public health and  
25 the environment. Hazardous materials are characterized by certain chemical, physical, or  
26 infectious properties. CCR Title 22, Chapter 11, Article 2, Section 66261 defines a  
27 hazardous material as a substance or combination of substances which, because of its  
28 quantity, concentration, or physical, chemical, or infectious characteristics, may either:  
29 (1) cause, or significantly contribute to, an increase in mortality or an increase in serious  
30 irreversible, or incapacitating reversible illness; or (2) pose a substantial present or  
31 potential hazard to human health or environment when improperly treated, stored,  
32 transported, or disposed of or otherwise managed.

33 According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of  
34 toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous  
35 wastes are hazardous substances that no longer have a practical use, such as material that  
36 has been abandoned, discarded, spilled, or contaminated, or which is being stored prior to  
37 disposal.

38 Depending on the type and degree of contamination that is present in soil and  
39 groundwater, any of several governmental agencies may have jurisdiction over the  
40 proposed Project site. Generally, the agency with the most direct statutory authority over  
41 the affected media is designated as the lead agency for purposes of overseeing any  
42 necessary investigation or remediation. Typically, sites that are nominally contaminated  
43 with hazardous materials remain in the jurisdiction of local hazardous materials agencies,  
44 such as the LAFD. Sites that have more heavily contaminated soils are more likely to fall  
45 under the jurisdiction of the DTSC, which is authorized to administer the federal  
46 hazardous waste program under the RCRA and is also responsible for administering the

1 State Superfund Program, under the Hazardous Substance Account Act. The DTSC  
2 provides guidelines for cleanup oversight through an environmental oversight agreement  
3 for government agencies or a voluntary cleanup agreement for private parties.

4 Sites that have contaminated groundwater fall within the jurisdiction of the Los Angeles  
5 RWQCB and are subject to the requirements of the Porter-Cologne Water Quality  
6 Control Act. Contaminated groundwater that is proposed to be discharged to surface  
7 waters or to a publicly owned treatment works would be subject to the applicable  
8 provisions of the Clean Water Act (CWA), including permitting and possibly  
9 pretreatment requirements. An NPDES permit is required to discharge pumped  
10 groundwater (whether contaminated or not) to surface waters, including local storm  
11 drains, in accordance with California Water Code Section 13260. Additional restrictions  
12 may be imposed upon discharges to water bodies that are listed as “impaired” under  
13 Section 303(d) of the CWA, including San Pedro Bay. A detailed description of NPDES  
14 permit requirements can be found in Section 3.13 – Water Quality, Sediments, and  
15 Oceanography of this Draft EIR. The ALBS discharges under individual NPDES permit  
16 No. CA0061051 (Order No. R4-2007-0030) was adopted by the Los Angeles RWQCB  
17 on February 9, 2007.

18 The ALBS maintains a Spill Prevention Plan that addresses site specific procedures for  
19 spill prevention, containment and countermeasures for all activities within the confines of  
20 their facility (ALBS, 2009).

## 21 **3.6.4 Impacts and Mitigation Measures**

### 22 **3.6.4.1 Methodology**

23 Groundwater and surface soils impacts have been evaluated with respect to several  
24 general parameters, including groundwater quality, groundwater quantity, and soil  
25 contaminants. The impact of the proposed Project on each of these parameters has been  
26 evaluated with respect to the significance criteria listed below.

27 The assessment of impacts is also based on regulatory controls and on the assumptions  
28 that the proposed Project would include the following:

- 29 • The sites individual NPDES permit for stormwater discharges, updated in 2007,  
30 includes requirements that are designed to bring the ALBS facility into compliance.  
31 In addition, construction is covered under the General Construction Activity  
32 Stormwater Permit.
- 33 • All contaminated soil and groundwater encountered during construction of the  
34 proposed Project would be handled, transported, remediated, and/or disposed of in  
35 accordance with the ALBS RAP approved by the Lead Regulatory Agency, LAHD  
36 lease conditions and all applicable federal, state, and local laws and regulations.
- 37 • In accordance with standard LAHD lease conditions, the site operator would  
38 implement a source control program, which provides for the inspection, control, and  
39 cleanup of leaks from aboveground tank and pipeline sources, as well as  
40 requirements related to groundwater and soil remediation.

41 Potential impacts to surface water and marine water quality are addressed in Section 3.13,  
42 Water Quality, Sediments, and Oceanography.

### 3.6.4.2 Threshold of Significance

Significance criteria used in this assessment are based on the *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) and other criteria applicable to Port projects. The effects of a project on groundwater and soil resources are considered to be significant if the project would result in any of the following:

**GW-1** Exposure of soils containing toxic substances and petroleum hydrocarbons, associated with prior operations, which would be deleterious to humans, based on regulatory standards established by the lead agency for the site.

**GW-2** Changes in the rate or direction of movement of existing contaminants; expansion of the area affected by contaminants; or increased level of groundwater contamination, which would increase risk of harm to humans.

**GW-3** Change in potable water levels sufficient to:

- Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
- Reduce yields of adjacent wells or well fields (public or private); or
- Adversely change the rate or direction of groundwater flow.

**GW-4** Demonstrable and sustained reduction in groundwater recharge capacity.

**GW-5** Violation of regulatory water quality standards at an existing production well, as defined in the CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.

Under Impact GW-4, groundwater recharge is related to the recharge of groundwater as part of potable water supply management.

### 3.6.4.3 Impact Determination

**Impact GW-1: Proposed Project construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.**

The current ALBS operations occupy approximately 7.7 acres (2.35 acres of land and 5.35 acres of water) at Berth 258. The proposed Project would change the ALBS lease hold (4.1 acres of land and 3.2 acres of water) and the dry dock/railway capacity of ALBS from the current capacity of five vessels to twelve vessels simultaneously. Soil and/or groundwater contamination has been identified during previous investigations that were conducted at the Project site, as discussed in Section 3.6.2.3. Those results indicated that there are two issue areas within the Project site, including: 1) the northern-most portion of the site, which is contaminated with TPH and PCBs; and, 2) the marine railways, which is contaminated primarily as a result of spend sandblast grit.

1 The proposed Project would include grading, excavation, and other construction-related  
2 activities that could disturb or expose soils that are contaminated. Project elements that  
3 could result in exposure of soils include: demolition of Buildings D and C1; development  
4 of new dry-dock area, and construction of the piers for the boat hoists; modification of  
5 site drainage; utility and infrastructure installation; grading and paving activities; and,  
6 construction of a new building approximately 2,400 sq ft. Three marine railways would  
7 be covered by the Phase 2 CDF, thereby encapsulating contaminated soils/sediments.

8 Excavations associated with these improvements could encounter previously unknown  
9 soil and/or groundwater contamination due to the limited extent of the previous  
10 investigations. Such discoveries could result in adverse impacts to construction and  
11 operations personnel. Improvements that would require asphalt or concrete paving such  
12 as the new dry dock area, the CDFs, and modifications to the site's drainage would  
13 essentially encapsulate contamination in the identified issue areas, thereby preventing  
14 runoff from leaching through the remaining contaminants. This would minimize the  
15 potential for exposure to underlying contaminants. As part of the proposed Project, all  
16 contaminated soil or groundwater encountered during construction would be handled,  
17 transported, remediated, and/or disposed of in accordance with all applicable federal,  
18 state, and local laws and regulations and in accordance with the regulatory lead agency  
19 (e.g., DTSC, Los Angeles RWQCB) and following conditions under LAHD leasing  
20 requirements (i.e., lease measures - LMs):

21 **Site Remediation Lease Requirement (LM GW-1).** Unless otherwise authorized by  
22 the lead regulatory agency for any given site, the Tenant (i.e., ALBS) shall address all  
23 contaminated soils within proposed Project boundaries discovered during demolition and  
24 grading activities. Contamination existing at the time of discovery shall be the  
25 responsibility of the past and/or current property owner. Contamination as a result of the  
26 construction process shall be the responsibility of the Tenant and/or Tenant contractors.  
27 Remediation shall occur in compliance with local, state, and federal regulations, as  
28 described in Section 3.6.3 (above) and Section 3.7.3 (in Section 3.7, Hazards and  
29 Hazardous Materials), and as directed by the lead regulatory agency for the site (such as  
30 the Los Angeles RWQCB or DTSC).

31 Soil removal shall be completed such that remaining contamination levels are below risk-  
32 based health screening levels for industrial sites established by OEHHA and/or applicable  
33 action levels (e.g., Environmental Screening Levels, Preliminary Remediation Goals)  
34 established by the lead regulatory agency with jurisdiction over the site. Soil  
35 contamination waivers may be acceptable as a result of encapsulation (i.e., paving) and/or  
36 risk-based soil assessments for industrial sites, but are subject to the review of the lead  
37 regulatory agency and LAHD. Excavated contaminated soil shall be properly disposed of  
38 off-site unless use of such material on-site is beneficial to construction and approved by  
39 the agency overseeing environmental concerns. All imported soil to be used as backfill  
40 in excavated areas shall be sampled to ensure that it is suitable for use as backfill at an  
41 industrial site.

42 **Contamination Contingency Plan Lease Requirement (LM GW-2).** The following  
43 contingency plan shall be implemented to address contamination discovered during  
44 demolition, grading, and construction.

- 45 a) All trench excavation and filling operations shall be observed for the presence of  
46 free petroleum products, chemicals, or contaminated soil. Soil suspected of

1                   contamination shall be segregated from other soil. In the event soil suspected of  
2                   contamination is encountered during construction, the contractor shall notify the  
3                   LAHD's environmental representative. The LAHD shall confirm the presence of  
4                   the suspect material and direct the contractor to remove, stockpile or contain, and  
5                   characterize the suspect material. Continued work at a contaminated site shall  
6                   require the approval of the LAHD Project Engineer.

- 7                   b) Excavation of VOC-impacted soil may require obtaining and complying with a  
8                   South Coast Air Quality Management District Rule 1166 permit.
- 9                   c) The remedial option(s) selected shall be dependent upon a suite of criteria  
10                  (including but not limited to types of chemical constituents, concentration of the  
11                  chemicals, health and safety issues, time constraints, cost, etc.) and shall be  
12                  determined on a site-specific basis. Both off-site and on-site remedial options may  
13                  be evaluated.
- 14                  d) The extent of removal actions shall be determined on a site-specific basis. At a  
15                  minimum, the impacted area(s) within the boundaries of the construction area shall  
16                  be remediated to the satisfaction of the LAHD and the lead regulatory agency for  
17                  the site. The LAHD Project Manager overseeing removal actions shall inform the  
18                  contractor when the removal action is complete.
- 19                  e) Copies of hazardous waste manifests or other documents indicating the amount,  
20                  nature, and disposition of such materials shall be submitted to the LAHD Project  
21                  Manager within 60 days of project completion.
- 22                  f) In the event that contaminated soil is encountered, all on-site personnel handling or  
23                  working in the vicinity of the contaminated material must be trained in accordance  
24                  with USEPA and Occupational Safety and Health and Administration (OSHA)  
25                  regulations for hazardous waste operations or demonstrate they have completed the  
26                  appropriate training. Training must provide protective measures and practices to  
27                  reduce or eliminate hazardous materials/waste hazards at the work place.
- 28                  g) When impacted soil must be excavated, air monitoring will be conducted as  
29                  appropriate for related emissions adjacent to the excavation.
- 30                  h) All excavations shall be backfilled with structurally suitable fill material that is free  
31                  from contamination.

32                   With compliance with regulations and lease requirements, construction and operation of  
33                   the proposed Project would not result in the expansion of contaminated soils and would  
34                   not cause significant impacts.

35

### *Mitigation Measures*

The proposed Project includes Project elements (i.e., lease measures – **LM GW-1** and **LM GW-2** described above) to address contamination. No mitigation is required.

### *Residual Impacts*

Impacts would be less than significant.

### **Impact GW-2: Proposed Project construction and operation would not result in expansion of the area affected by contaminants.**

As discussed for Impact GW-1, soil and groundwater in limited portions of the Project site have been affected by waste and petroleum products, as a result of current and historic site uses and adjacent uses. No remedial actions have occurred at the site to address the identified contamination, or issue areas. Therefore, the soil contamination remains an issue at the site. Excavation and grading activities in these areas, and potentially others areas with unknown contamination, could encounter contaminated soil or groundwater. However, the removal of contaminated soil or dewatering of contaminated groundwater would be localized to the site and would not be expected to cause remaining contamination to migrate to off-site areas.

The northern issue area is located in an area of the ALBS that would be redeveloped as a dry dock area to support boat maintenance and building activities under the proposed Project. The marine railways issue area in the southern portion of the ALBS would be partially covered by construction of the Phase 2 CDF. These areas would be paved, or encapsulated, which would effectively serve as an impermeable surface barrier above any contamination zone. One of the major components of the Project is the improvement of on-site drainage conditions by altering the direction of stormwater flow. Currently, stormwater flows untreated through the existing stormwater system or over the site and into Fish Harbor during a storm event. As part of the proposed Project, a new storm drain would be installed in conjunction with the installation of an oil/water separator. High-strength pavement would be installed over the entire site, and would be designed to drain stormwater away from the harbor and to be collected by the storm drain system for treatment in the proposed oil/water separator facility.

Under the proposed Project, dikes would be used to redirect the flow of stormwater around the remaining buildings. A raised curb/step would be constructed around Buildings C2 and A1, a combination of either trench drains and/or catch basins to capture the flow would be introduced, and the flow would be directed to the new oil/grease separator unit(s) to comply with the BMP requirements of the NPDES and WDR permitted discharge into harbor waters. Consequently, the proposed Project is not expected to change the rate, direction, or extent of existing soil and/or groundwater contamination, but would result in beneficial effects associated with the redirection of site runoff and pretreatment prior to discharge.

Operation of the proposed Project would comply with all applicable existing regulations, which would prevent the Project from affecting, or expanding any potential areas affected by contamination, nor increasing the level of contamination. Therefore, no significant impact is anticipated. In addition, no permanent dewatering systems are anticipated with development of the Project. As such, no significant impact is anticipated to the rate or direction of movement of any existing contaminants beneath the Project site or the area affected by or the level of groundwater contaminants.

1 Therefore, construction and operation of the proposed Project would not result in  
2 expansion of the existing issue areas affected by contaminants and would not cause  
3 significant impacts.

4 *Mitigation Measures*

5 No mitigation is required.

6 *Residual Impacts*

7 Impacts would be less than significant.

8 **Impact GW-3: Proposed Project construction and operation would**  
9 **not result in a change to potable water levels.**

10 Drinking water is provided to the proposed Project area by the LADWP. Although  
11 shallow groundwater may be locally extracted during construction dewatering operations  
12 (e.g., for utility lines, storm drains, and SUSMP devices), groundwater beneath the  
13 Project site is non-potable. Localized groundwater withdrawal would have no impact on  
14 potential potable water supplies.

15 Because drinking water is provided to the Project area by the LADWP and no potable  
16 groundwater exists beneath the Project site, construction and operational of the Project  
17 would result in no impacts to potable water levels.

18 *Mitigation Measures*

19 No mitigation is required.

20 *Residual Impacts*

21 There would be no impacts.

22 **Impact GW-4: Proposed Project construction and operation would**  
23 **not result in a demonstrable and sustained reduction in groundwater**  
24 **recharge capacity (for potable water storage).**

25 The proposed Project area is underlain by saline, non-potable groundwater. As such, any  
26 changes in site permeability would not affect potable groundwater recharge capacity.

27 Because the water is non-potable, the amount of infiltration to the groundwater beneath  
28 the Project site is irrelevant with respect to potential recharge of the groundwater for  
29 drinking water storage. Therefore, any temporary increase or decrease in site  
30 permeability at the Project site during construction or operational activities would not  
31 result in impacts.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 There would be no impacts.

5 **Impact GW-5: Proposed Project construction and operation would**  
6 **not result in violation of regulatory water quality standards at an**  
7 **existing production well.**

8 Drinking water is provided to the proposed Project area by the LADWP. No potable  
9 water production wells are located within a 2-mile radius of the proposed Project  
10 (LACoDPW, 2010). Groundwater in the vicinity of the proposed Project is subject to  
11 extensive saltwater intrusion and is not a source of potable water (WRD, 2004; ERM,  
12 2010) and its use is not considered a drinking water supply under the Los Angeles Region  
13 Water Quality Control Plan (RWQCB, 1994).

14  
15 As no existing production wells are located in the vicinity of the Project site, proposed  
16 Project construction and operation would not result in impacts to water quality at  
17 production wells.

18 *Mitigation Measures*

19 No mitigation is required.

20 *Residual Impacts*

21 There would be no impacts.

22 **3.6.4.4 Summary of Impact Determinations**

23 Table 3.6-1 summarizes the impact determinations of the proposed Project and related to  
24 Groundwater and Soils, as described in the detailed discussion in Section 3.6.4.3.  
25 Identified potential impacts are based on federal, state, or City of Los Angeles  
26 significance criteria, Port criteria, and the scientific judgment of the report preparers, as  
27 applicable.

28

**Table 3.6-1 Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project**

<b>Environmental Impacts</b>	<b>Impact Determination</b>	<b>Mitigation Measures</b>	<b>Impacts after Mitigation</b>
<b>GW-1:</b> Proposed Project construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.	Less than significant	With implementation of lease measures <b>LM GW-1</b> and <b>LM GW-2</b> and adherence to regulations, no mitigation is required	Less than significant
<b>GW-2:</b> Proposed Project construction and operation would not result in expansion of the area affected by contaminants.	Less than significant	No mitigation is required	Less than significant
<b>GW-3:</b> Proposed Project construction and operation would not result in a change to potable water levels.	No impact	No mitigation is required	No impact
<b>GW-4:</b> Proposed Project construction and operation would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).	No impact	No mitigation is required	No impact
<b>GW-5:</b> Proposed Project construction and operation would not result in violation of regulatory water quality standards at an existing production well.	No impact	No mitigation is required	No impact

### 1 **3.6.4.5 Mitigation Monitoring**

2 In the absence of significant impacts, mitigation measures are not required. Compliance  
3 with existing regulations and implementation of the following lease measures (discussed  
4 for under Impact GW-1 in Section 3.6.4.3) would contribute to reducing effects of  
5 potentially exposing construction and operations personnel to contaminated soils that  
6 may be uncovered during site grading and excavation:

7

<p><b>Impact GW-1: Construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.</b></p>	
<p>Lease Measure</p>	<p><b>LM GW-1: Site Remediation Lease Requirement.</b> Unless otherwise authorized by the lead regulatory agency for any given site, the Tenant (i.e., ALBS) shall address all contaminated soils within proposed Project boundaries discovered during demolition and grading activities. Contamination existing at the time of discovery shall be the responsibility of the past and/or current property owner. Contamination as a result of the construction process shall be the responsibility of the Tenant and/or Tenant contractors. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.6.3 (above) and Section 3.7.3 (in Section 3.7, Hazards and Hazardous Materials), and as directed by the lead regulatory agency for the site (such as the Los Angeles RWQCB or DTSC).</p> <p>Soil removal shall be completed such that remaining contamination levels are below risk-based health screening levels for industrial sites established by OEHHA and/or applicable action levels (e.g., Environmental Screening Levels, Preliminary Remediation Goals) established by the lead regulatory agency with jurisdiction over the site. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) and/or risk-based soil assessments for industrial sites, but are subject to the review of the lead regulatory agency and LAHD. Excavated contaminated soil shall be properly disposed of off-site unless use of such material on-site is beneficial to construction and approved by the agency overseeing environmental concerns. All imported soil to be used as backfill in excavated areas shall be sampled to ensure that it is suitable for use as backfill at an industrial site.</p>
	<p><b>LM GW-2: Contamination Contingency Plan Lease Requirement.</b> The following contingency plan shall be implemented to address contamination discovered during demolition, grading, and construction.</p> <ul style="list-style-type: none"> <li>a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Soil suspected of contamination shall be segregated from other soil. In the event soil suspected of contamination is encountered during construction, the contractor shall notify the LAHD's environmental representative. The LAHD shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material. Continued work at a contaminated site shall require the approval of the LAHD Project Engineer.</li> <li>b) Excavation of VOC-impacted soil may require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.</li> <li>c) The remedial option(s) selected shall be dependent upon a suite of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both off-site and on-site remedial options may be evaluated.</li> <li>d) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the impacted area(s) within the boundaries of the construction</li> </ul>

	<p>area shall be remediated to the satisfaction of the LAHD and the lead regulatory agency for the site. The LAHD Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.</p> <p>e) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the LAHD Project Manager within 60 days of project completion.</p> <p>f) In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material must be trained in accordance with USEPA and Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations or demonstrate they have completed the appropriate training. Training must provide protective measures and practices to reduce or eliminate hazardous materials/waste hazards at the work place.</p> <p>g) When impacted soil must be excavated, air monitoring will be conducted as appropriate for related emissions adjacent to the excavation.</p> <p>h) All excavations shall be backfilled with structurally suitable fill material that is free from contamination.</p>
Timing	Prior to and concurrent with proposed Project construction.
Methodology	LAHD will include these lease measures in lease agreement with tenant.
Responsible Parties	ALBS, LAHD
Residual Impacts	Less than significant.

1

### 2 **3.6.5 Significant Unavoidable Impacts**

3 No significant unavoidable impacts on Groundwater or Soils would occur during  
4 construction or operation of the proposed Project.