

F. HAZARDS AND HAZARDOUS MATERIALS

1. INTRODUCTION

This section provides an analysis of potential impacts associated with hazards and hazardous materials that could occur with implementation of the proposed project. The analysis presented in this section is based on information, conclusions, and recommendations contained in the following documents:

- City of Long Beach General Plan Public Safety Element (October 1988);
- Phase I Environmental Site Assessment (ESA) performed for the project site by Leighton and Associates, Inc. (Leighton) in August 2004;
- Interim Remedial Action Plan (RAP) prepared for the project site by URS Corporation (URS) in October 2009;
- Peer review of the Leighton Phase I ESA prepared by Ninyo & Moore Geotechnical and Environmental Sciences Consultants (Ninyo & Moore) in October 2009, which evaluates the adequacy of the report relative to the current proposed project; and
- Supplemental Letter Report regarding hazardous materials conditions prepared by Ninyo & Moore in October 2010. The Supplemental Letter Report incorporates all the relevant studies, investigations, information, conclusions, and recommendations contained or referenced in the 2004 Leighton Phase I ESA and the 2009 URS Interim RAP, as well as subsequent research and project-specific recommendations.

These documents are included in Appendix F of this EIR.

2. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Hazardous Materials Management

(a) Hazardous Materials Storage, Use, and Disposal

The definition of “hazardous material” is different for different regulatory programs; for purposes of this EIR, the definition is similar to that in the California Health and Safety Code, Section 25501:

Hazardous materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

“Hazardous waste” is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health and Safety Code, Section 25517, and in the California Code of Regulations, Title 22, Section 66261.2:

Hazardous wastes are wastes that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an

increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

The use and storage of hazardous materials and wastes are subject to federal, State, regional, and local agency regulations, as described below.

(i) Federal Level

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, outlines the potential liability related to the cleanup of hazardous substances, available defenses to such liability, appropriate inquiry into site status under Superfund, and statutory definitions of hazardous substances and petroleum products. The proposed project would be subject to CERCLA for the cleanup of hazardous substances at the project site, including petroleum hydrocarbons in soil and groundwater.

(ii) State Level

In California, Titles 22 and 23 of the California Code of Regulations (CCR) address hazardous materials and wastes. Title 22 defines, categorizes, and lists hazardous materials and wastes. Title 23 addresses public health and safety issues related to hazardous materials and wastes, and specifies disposal options. Title 27 addresses landfill closure standards and landfill-related public health and safety issues. Titles 22 and 23 are applicable to the project site due to the known presence of hazardous materials in soil and groundwater on-site, while Title 27 applies to the project site due to the potential presence of a former landfill on-site (discussed below).

The California Occupational Safety and Health Administration (Cal/OSHA) has established requirements to limit occupational exposure to lead and asbestos. Lead is a naturally occurring element and heavy metal that was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments, and drying agents from the early 1950s to 1972, when the Consumer Products Safety Commission specified limits on lead content in such products. Lead-based paint (LBP) is of concern both as a source of exposure and as a major contributor to lead in interior dust and exterior soil. The most common paths of lead exposure in humans are through ingestion and inhalation. While adults can be affected by excessive exposure to lead, the primary concern is the adverse health effects on children. If not detected early, children with high levels of lead in their bodies can suffer from damage to the brain and nervous system, behavior and learning problems such as hyperactivity, slowed growth, hearing problems, and headaches. Adults can suffer from lead-related effects such as reproductive problems (in both men and women), high blood pressure and hypertension, nerve disorders, memory and concentration problems, and muscle and joint pain. Cal-OSHA has established limits of exposure to lead contained in dusts and fumes. Specifically, California Code of Regulations (CCR) Title 8, Section 1532.1 establishes exposure limits, requires exposure monitoring and respiratory protection, and mandates good working practices by workers exposed to lead.

Asbestos, which is made up of microscopic fibers, is a naturally occurring mineral. Asbestos has unique qualities which include its strength, fire resistance, resistance to chemical corrosion, poor conduction of heat, noise, and electricity, and low cost. Asbestos has been widely used in the building industry for a variety of uses, including acoustic and thermal insulation and fireproofing. It is often found in ceiling and floor tiles, linoleum, and pipes, as well as on structural beams and asphalt. Despite its useful qualities, asbestos is

associated with lung diseases caused by inhalation of airborne asbestos fibers. Asbestos becomes a hazard if the fibers separate and become airborne. Any building, structure, surface asphalt driveway, or parking lot constructed prior to 1981 could contain ACMs. In California, any facility known to contain asbestos is required to have a written asbestos management plan (also known as an Operations and Maintenance Program [O&M Program]). Removal of ACMs must be conducted in accordance with the requirements of SCAQMD Rule 1403, as discussed further below.

Construction, alteration and repair work, including demolition, is subject to Title 8, CCR, Section 1532.1 for lead, and Section 1529 for asbestos, which outlines permissible exposure limits, exposure assessment requirements, methods of compliance, and necessary respiratory protection and protective clothing. These requirements are applicable to the project site due to the known presence of lead residues (LBP) and ACMs on-site.

(iii) Regional Level

Various regional agencies enforce federal and state regulations in the project area, including the South Coast Air Quality Management District (SCAQMD) and Los Angeles Regional Water Quality Control Board (RWCQB). The rules and regulations enforced by these agencies that are applicable to the proposed project are discussed below.

Title 40, CFR, Part 61.145, *National Emission Standard for Asbestos, Standard for Demolition and Renovation*, and SCAQMD Rule 1403, *Asbestos Emissions from Demolition/Renovation Activities*, require the following with regard to asbestos-containing materials (ACMs):

- A survey must be conducted to inspect, identify, and quantify all friable and Class I and Class II non-friable ACMs prior to demolition or restoration.
- Proper notification must be submitted to SCAQMD.
- An on-site representative must be present during removal, disturbance, and handling of ACMs.
- ACMs must be removed in accordance with the required schedule and procedures and following the proper handling operations.
- ACMs must be disposed of following proper disposal methodology, including maintaining waste shipment records and using appropriate labeling.

These requirements are applicable to the proposed project due to proposed demolition activities and the known presence of asbestos-containing materials within existing improvements on-site.

SCAQMD Rule 1150 requires implementation of an approved Excavation Management Plan for excavations of landfill material, while SCAQMD Rule 1166 sets control requirements for volatile organic compound (VOC) emissions from excavating, grading, handling, or treating contaminated soil. Requirements of Rule 1150 include development and approval of an Excavation Management Plan that includes applicable measures to be employed as needed throughout excavation activities. Requirements of Rule 1166 include development and approval of a mitigation plan, notification to SCAQMD, monitoring, and handling requirements for the contaminated soil. These SCAQMD Rules are applicable to the project site due to the known presence of

contaminated soil that will require remediation, and the potential presence of a former landfill facility on-site.

Under California Water Code, Division 7, Section 13304, the Los Angeles RWQCB oversees the Underground Storage Tank (UST) Program for the Los Angeles regional area, and therefore also oversees the investigation and mitigation of sites contaminated from USTs, wells, or other sources. Oversight by the Los Angeles RWQCB is not limited to specific pollutants or specific media but is focused on determining if an unauthorized release may result in pollution of regional water bodies. Specific areas of concern within the Los Angeles RWQCB jurisdiction include the San Gabriel River Watershed. The project site is under the jurisdiction of the RWQCB due to the known former presence, and potential presence of USTs on-site.

(iv) Local Level

At the local level, the Long Beach Certified Unified Program Agency (CUPA) has primary responsibility for hazardous materials regulation and enforcement. CUPA is designed to consolidate and administer hazardous material permits, inspections, and enforcement activities throughout the City's jurisdiction. The goal of this program is to create a more cohesive and efficient system whereas applications and required forms are standardized and consolidated in conjunction with inspection, and annual fees for each program are merged into a single fee system creating a more consistent and efficient program. CUPA was first created in 1993 under Senate bill 1082, which administratively consolidated six hazardous materials and waste programs under one agency. The Long Beach Fire Department (LBFD) and the Long Beach Health Department (LBHD) share oversight of Long Beach CUPA. The CUPA program elements include the following:

1. Uniform Fire Code Plans and Inventory Requirements;
2. Hazardous Materials Release Response Plans and Inventory Program ("Community-Right-To-Know");
3. Aboveground Storage Tank (AST) Spill Prevention Control and Countermeasure Plan (SPCC);
4. Underground Storage Tank (UST) Program;
5. Hazardous Waste Generator and On-Site Hazardous Waste Treatment Programs (Tiered Permitting); and
6. California Accidental Release Prevention Program (CalARP).

The Long Beach CUPA has jurisdiction over the project site due to the known presence of soil and groundwater contamination associated with historic gas station uses and oil extraction activities on-site.

Additionally, the proposed project is subject to the following chapters included in Title 8, *Health and Safety*, of the City of Long Beach Municipal Code with regard to hazardous materials:

- Chapter 8.85 – *Underground and Aboveground Storage Tanks*. Designates the City with authority to prevent injury or damage to businesses or property due to air pollution.

- Chapter 8.86 – *Hazardous Materials Release Response Plans and Inventory*. Designates the Long Beach Certified Unified Program Agency (CUPA) as the local authority for underground and aboveground storage tank compliance.
- Chapter 8.87 – *Hazardous Waste Control*. Designates the Long Beach CUPA as the local authority to enforce Chapter 6.5 of Division 20 of the California Health and Safety Code.
- Chapter 8.88 – *Hazardous Materials Clean-Up*. Requires site characterization, site remediation, and initial and final reports for contaminated sites in accordance with state and local laws and regulations.

The project site is subject to the above regulations due to the presence of known hazardous materials in on-site soil and groundwater, as well as the former presence of USTs and oil extraction infrastructure at the site.

(b) Hazardous Materials Transportation

The U.S. Department of Transportation (DOT) has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. DOT regulations specify packaging requirements for different types of materials. EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations. In California, the California Highway Patrol, the California DOT (Caltrans), and the DTSC play a role in enforcing hazardous materials transportation requirements.

b. Existing Conditions

(1) Hazardous Materials Evaluation

In October 2010, Ninyo & Moore prepared a project-specific evaluation of hazardous materials conditions at the project site (included in Appendix F of this EIR), which included a review of previous site investigation reports as well as additional site research. Based on the review of these documents, and consideration of all relevant site information, conclusions, and recommendations regarding the project site, the following Recognized Environmental Conditions (RECs) were identified which may pose an environmental hazard:

- The northeast corner of the site was formerly a 76 gasoline service station #5379 with petroleum hydrocarbon-impacted soil and groundwater beneath the site. Conoco/Phillips operated an air sparging system under Regional Water Quality Control Board (RWQCB) oversight, to remediate the dissolved phase of petroleum hydrocarbons in groundwater to commercial levels. To date, however, site closure by RWQCB has not occurred, since petroleum hydrocarbon concentrations at the site are still above acceptable levels.
- Crude oil is present in two monitoring wells in this area (EW-3 in the central portion of the former on-site gasoline station and MW-6 in the area of the Tidewater Oil Easement). Source of the crude oil was unknown, although possibly associated with active and abandoned crude oil pipelines paralleling the south side of PCH.
- In 2004, Conoco/Phillips sampled MW-13, no liquid phase hydrocarbons (LPH) were present, and MTBE was detected at 17,000 µg/L. The source of this was determined to be the Mobil Station (formerly Exxon), located off-site across PCH.

- Six abandoned oil wells are located at the site.
- An 8-inch diameter crude oil pipeline (operated by Chevron) and up to 10 reported abandoned pipelines are adjacent to the northern boundary of the site. Potential additional pipelines associated with previous oil wells are located at the site.
- Asbestos-Containing Materials and lead-based paint are present in on-site structures.

These hazardous materials conditions that currently exist at the project site are considered RECs that need to be addressed through remediation to allow for future site redevelopment. The current site conditions are illustrated below in **Figure IV.F-1, Existing Site Conditions – Hotel Parcel**, **Figure IV.F-2, Existing Site Conditions – Former Gas Station Parcel**, and **Figure IV.F-3, Existing Pipelines and Utilities Map**.

Recommended actions identified by Ninyo & Moore to address the above-listed RECs include the following:

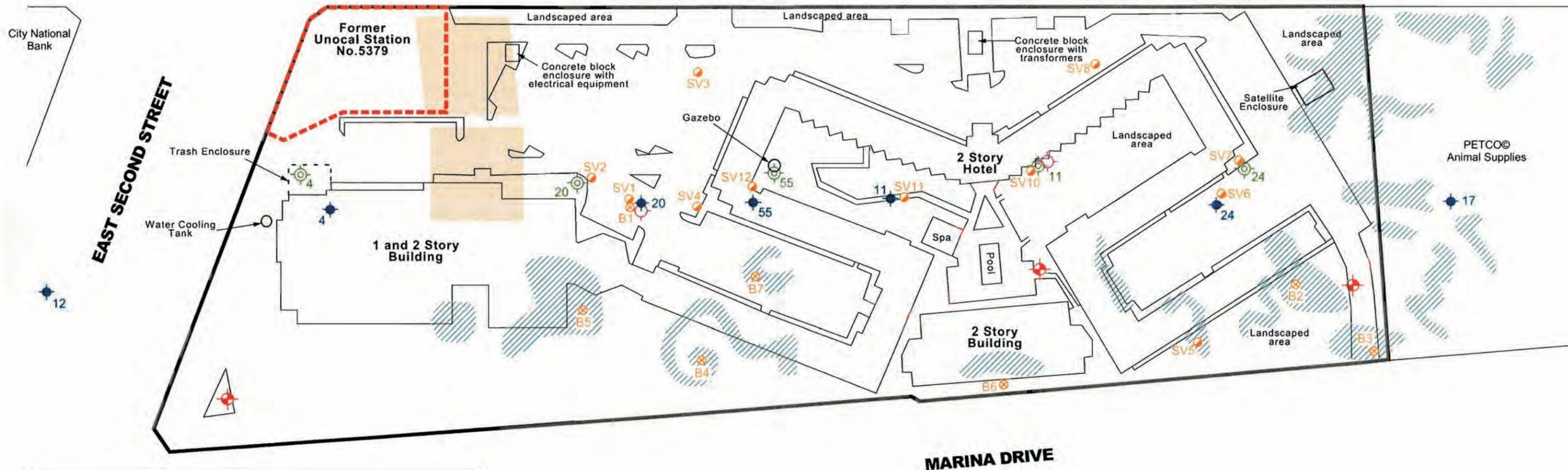
1. A geophysical survey of the Tidelands Oil Easement along PCH to determine pipeline locations and to determine if pipelines were associated with previous oil wells on-site.
2. A soil gas survey for methane, hydrogen sulfide, and volatile organic compounds (VOCs) in the area of the abandoned oil well No. 4.
3. Install three groundwater monitoring wells along the Tidelands Oil Easement to assess crude oil and petroleum impacted groundwater.
4. Sample the three existing and the three proposed groundwater monitoring wells for parameters for discharging groundwater during dewatering construction activities.
5. Collect soil samples for petroleum impacted soil of the oil sumps in the northern area of the site and in the area of suspected mud pit and/or areas of stained soil noted by others in aerial photographs.
6. ACMs and LBP-containing materials should be abated by a qualified contractor under current guidelines.
7. If a dewatering system is installed at the site during redevelopment, a vertical barrier should be installed around the western and southern boundaries of the former 76 Service Station #5379 to reduce the lateral migration of petroleum impacted groundwater to the rest of the site. Groundwater from a dewatering system will need to be permitted through the Los Angeles RWQCB and if necessary, discharge would need to be treated.
8. Oil wells located on the site will need to be re-abandoned in accordance with current Department of Oil, Gas, and Geothermal Resources (DOGGR) regulations.
9. Observations should be made during site development for other areas of contamination. If materials are encountered further investigation may be warranted.

These recommendations serve as the basis for remediation of the project site, implementation of which would be required for any future redevelopment of the affected parcels that comprise the project site.

Mobil Station
6401 East Pacific Coast Highway

Retail Center

PACIFIC COAST HIGHWAY



LEGEND

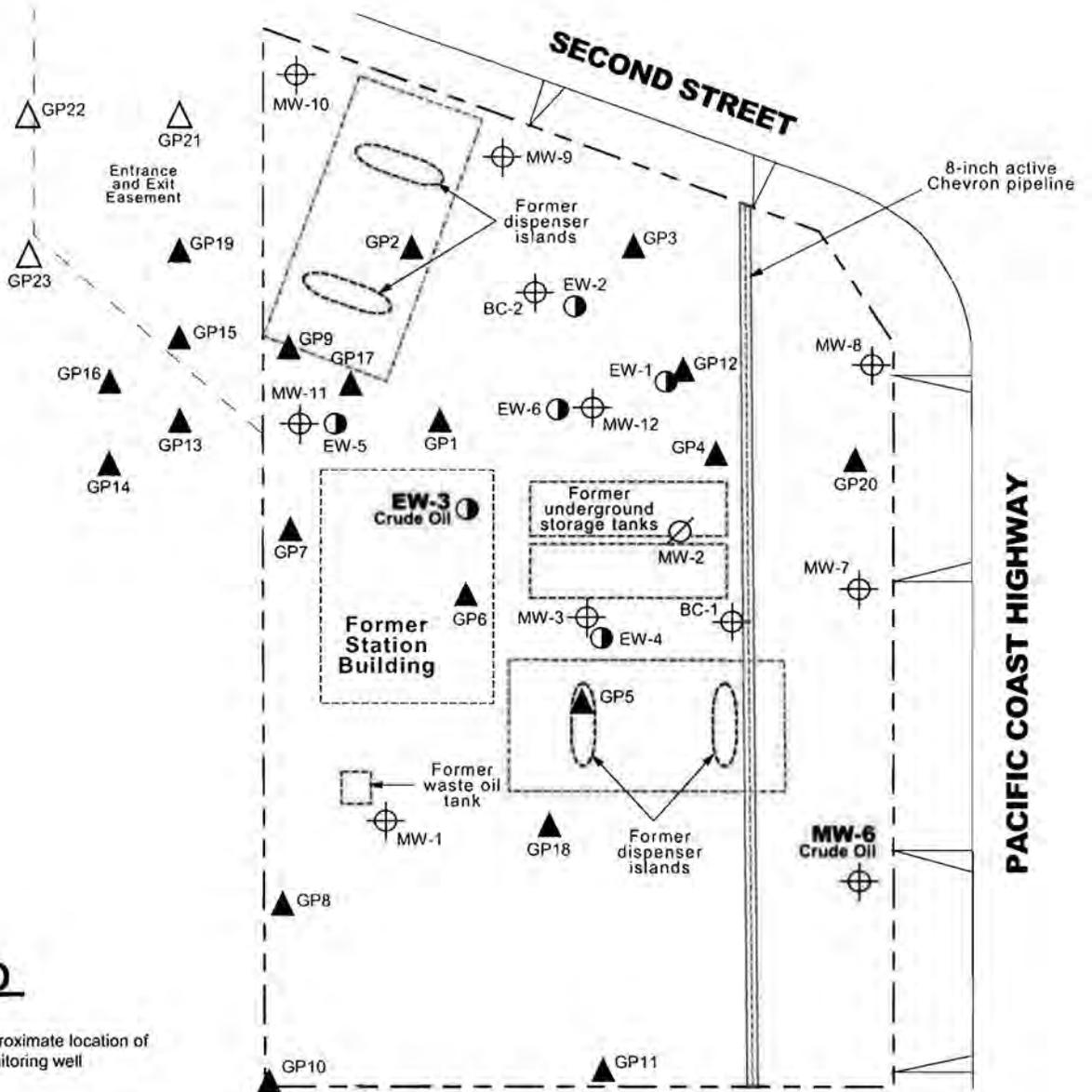
- Approximate location of groundwater monitoring well
- Approximate location of oil well
- Approximate location and number of plugged and abandoned oil well
- Magnetic anomalies (wells) identified by geophysical methods (Well Nos. 11 and 20)
- Location of boring
- Location of soil vapor probe
- Approximate location of suspect mudpit and/or area of dark staining
- Approximate location of suspect oil sumps



Existing Site Conditions-Hotel Parcel

FIGURE
IV.F-1

Second+PCH Development
Source: Leighton and Associates, Inc., 2004.



LEGEND

- MW-12  Approximate location of monitoring well
- EW-4  Approximate location of extraction well
- GP23  Approximate location of proposed geoprobe boring
- GP20  Approximate location of geoprobe boring
- MW-2  Approximate location of monitoring well



Existing Site Conditions-Former Gas Station Parcel

Second+PCH Development
 Source: Leighton and Associates, Inc., 2004.

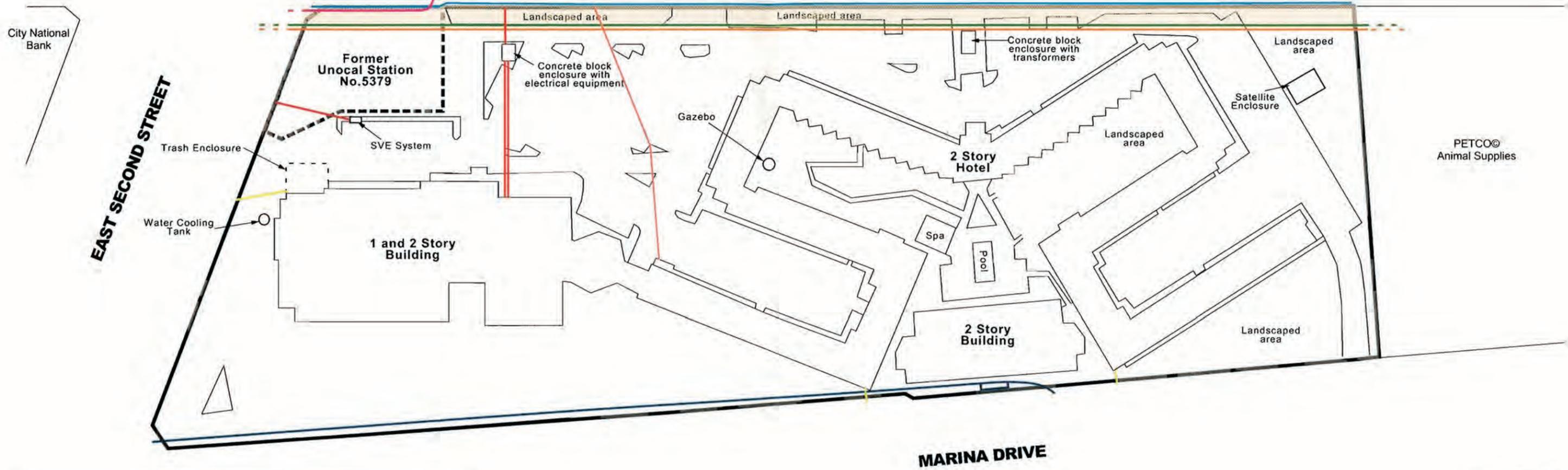
FIGURE
IV.F-2

Former Chevron
#9-0016

Mobil Station
6401 East Pacific Coast Highway

Retail Center

PACIFIC COAST HIGHWAY



LEGEND

-  Long Beach Water, 12" ACP
-  Southern California Edison
-  Gas Line
-  Chevron Pipeline 8" Crude Oil Pipeline
-  ARCO 4" Crude Oil Pipeline
-  Chevron-Texaco 8" Crude Oil Pipeline (Formerly Shell Oil)
-  Verizon Lines
-  Chevron-Texaco Easement Located From Curb to 20' Onto Site, Containing Several Active Pipelines

Existing Pipelines and Utilities Map

FIGURE
IV.F-3

Second+PCH Development
Source: Leighton and Associates, Inc., 2004.



This page intentionally blank.

Environmental Database Search

The results of a 2010 EDR database records review for the site are summarized below in **Table IV.F-1, 2010 Database Record Review Results**. Table IV.F-1 provides the name of each database searched, the purpose of the database, and the project site's status relative to the database listing and relevant site information.

As discussed in Table IV.F-1, the 2010 database records review confirmed that the project site and several surrounding properties are listed in a number of database records as having been adversely affected by hazardous materials releases, including petroleum hydrocarbons. The project site itself is listed due to petroleum hydrocarbon releases in soil and ground water from leaking USTs, while the Mobil station across PCH from the project site is also listed for the same reason. The off-site Mobil station is the only known off-site property with the potential to adversely affect the project site due to hazardous materials contamination, as contaminants migrate down-gradient in groundwater toward the project site. Additionally, the records reveal that a former Los Angeles County Flood Control Dump (landfill) may also be located on the project site. Each of these issues identified through the database records search are reflected in the listing presented above of RECs at the site.

City Directory Review

Ninyo & Moore reviewed City directories for 6280 East 2nd Street and 6400 East Pacific Coast Highway (the project site), as well as adjacent properties along East Marina Drive and North Studebaker Road. Based on completion of the City Directory Search of the project site and adjacent properties, no previously unknown businesses or site uses were found that are considered an environmental concern that requires further investigation.

Oil Field-Related Site Use

From historical records it is known that the site has been used for oil industry related activities, including at least six abandoned oil wells (see below). Hydrogen sulfide, VOCs, semi-volatile organic compounds (SVOCs), and methane are associated with oil activities. Site investigation specifically for oil field-related contaminants was not noted in the Interim RAP or other site reports. Given the nature of contaminants typically associated with oil extraction activities, the former use of the project site for oil industry-related activities poses an environmental concern and is an identified REC at the site.

Abandoned Oil Wells

At least six reported abandoned oil wells are located on the project site. The exact locations of the abandoned wells are currently not known; however, California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) records for the abandoned oil wells were reviewed to assess if they were properly abandoned in accordance with regulatory requirements. The information provided below in **Table IV.F-2, Former On-Site Oil Wells**, is summarized from DOGGR records for wells San Gabriel Wells #4, 11, 17, 20, 24, and 55.

As shown in Table IV.F-2, although all on-site oil wells were plugged and abandoned under the supervision of, and approved by, DOGGR staff, the on-site wells may still have resulted in releases of hazardous materials that pose an environmental concern. The on-site oil wells are RECs for the site.

Table IV.F-1

2010 Database Record Review Results

Record Database Searched	Description of Database	Project Site Status
<p>Federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List: <i>Distance Searched – ½ mile</i></p>	<p>The Federal CERCLIS database contains properties which are either proposed or on the Federal National Priorities List (NPL) and properties which are in the screening and assessment phase for possible inclusion on the NPL. This database also includes properties listed as No Further Remedial Action Planned (NFRAP).</p>	<p>The site was not listed on this database. LCW Oil Operations polychlorinated biphenyl (PCB) site at 6433 East 2nd Street, approximately 1,350 feet northeast and cross-gradient of the site was listed on this database. The facility indicated that it was not listed on the NPL database and that it was considered a “removal only site (no site assessment work needed).” Based on this information, this facility would not be considered an environmental concern to the site.</p>
<p>Federal Corrective Action Report (CORRACTS): <i>Distance Searched – 1 mile</i></p>	<p>The United States Environmental Protection Agency (EPA) maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing corrective action. A corrective action order is issued when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.</p>	<p>The site is not listed on this database. One facility, EPTC Alamitos at 690 North Studebaker Road, approximately 0.75-mile northeast and cross-gradient of the site is listed. According to the report the facility is a small quantity generator with a workplan approved. No other information was provided. This listing does not indicate a release, and based on distance, direction, and facility type, it would not be considered an environmental concern.</p>
<p>Federal RCRA Generators List: <i>Distance Searched – Site and Adjoining Properties</i></p>	<p>This list identifies facilities that generate hazardous waste as defined by RCRA. Inclusion on these lists is for permitting purposes and is not indicative of a release.</p>	<p>Four sites were listed in database results, but none of the four facilities listed are considered an environmental concern to the project site because they have not received any violations and are not located on the project site.</p>
<p>State CalSites Database (CalSites) or State-Equivalent CERCLIS: <i>Distance Searched – 1 mile</i></p>	<p>The CalSites database, also known as the State-equivalent NPL, is maintained by California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC). This database contains information on Annual Work Plan and both known and potentially contaminated properties. This database includes the state-equivalent CERCLIS listing.</p>	<p>The project site was not listed on this database. Four facilities are located within the 1-mile search radius. Oakwood Apartment at 333 First Street, approximately 0.4-mile southeast and cross gradient of the site was listed. This listing indicates that the facility type is “voluntary cleanup.” The most recent completed information was a remedial investigation report in 2010. Based on the distance and direction of this facility, it would not</p>

Table IV.F-1 (Continued)

2010 Database Record Review Results

Record Database Searched	Description of Database	Project Site Status
		<p>be considered an environmental concern of potential impact to the project site. The remaining three facilities are located more than 0.5-mile and cross- or down-gradient of the site. Based on their distance and direction from the site, they would not be considered an environmental concern.</p>
<p>State Solid Waste Landfill Sites (SWLF): <i>Distance Searched – ½ mile</i></p>	<p>The State SWLF database consists of open and closed solid waste disposal facilities and transfer stations. The data comes from the Integrated Waste Management Board’s Solid Waste Information System and the SWRCB’s Waste Management Unit Database.</p>	<p>The City Dump & Salvage #2 at 7001-7199 Pacific Coast Highway was listed on this database. This listing was discussed in the 2004 Phase I ESA, and concluded that based on the ceased discharge status, type of waste facility, and solid waste assessment test, the facility is unlikely to have the potential to adversely impact the project site. One additional listing, the LA County Flood Control Dump at Southwest Westminster Avenue and Pacific Coast Highway, was listed on this database. The report indicates that the facility has an operator’s status of “closed” and activity is listed as “solid waste disposal site.” Ninyo & Moore reviewed the Solid Waste Information System’s (SWIS’s) website for additional information. Inspection reports dated as recent as 2007 indicated that the exact location of this facility is unknown. Based on the location description of southwest Westminster Avenue and Pacific Coast Highway, and the unknown exact location, this facility could be located on the project site and therefore is considered an environmental concern.</p>
<p>State Leaking Underground Storage Tank (LUST) Lists: <i>Distance Searched – ½ mile</i></p>	<p>The EDR database of LUST information system is obtained from the SWRCB and the California Regional Water Quality Control Board (RWQCB).</p>	<p>This site, Tosco 76 Station #5379 at 6280 East 2nd Street is listed on this database. In addition, Exxon Mobil Oil Corporation 130 at 6401 East Pacific Coast Highway, adjacent to the northeast corner of the site is also listed on this database. Both the site and adjacent facility are discussed in detail in the 2004 Phase I ESA. For the 6401 East Pacific</p>

Table IV.F-1 (Continued)

2010 Database Record Review Results

Record Database Searched	Description of Database	Project Site Status
		<p>Coast Highway property, the Phase I ESA stated that due to the status of the case and distance to the project site, this facility has the potential to adversely impact the project site.</p> <p>For the 6280 East 2nd Street, the Phase I ESA stated that the known presence of petroleum hydrocarbon impacted soil and groundwater beneath the site was considered a recognized environmental condition (REC).</p> <p>Ninyo & Moore reviewed the most recent groundwater monitoring and status report for the Exxon Mobil at 6401 East Pacific Coast Highway, from the SWRCB GeoTracker website. The groundwater monitoring wells along Pacific Coast Highway, closest to the site, were reviewed for groundwater information. Tertiary butyl alcohol (TBA), methyl tert-butyl ether (MTBE), total petroleum hydrocarbon as gasoline (TPHg) and benzene were found in maximum concentrations of 1,290 micrograms per liter (µg/l), 1,380 µg/l, 1,370 µg/l, and 1.97 µg/l, respectively (ERI, 2010).</p> <p>Four additional LUST facilities were listed on this database. Based on the report, the additional LUST listings were listed as “case closed” and are not be considered an environmental concern to the project site.</p> <p>The petroleum releases associated with both the 6401 East Pacific Coast Highway property located across PCH from the project site and the 6280 East 2nd Street site which is located in the northeast corner of the project site, are considered environmental concerns for potential impact to the project site.</p>

Table IV.F-1 (Continued)

2010 Database Record Review Results

Record Database Searched	Description of Database	Project Site Status
<p>State UST and AST Registration List: <i>Distance Searched – Site and Adjoining Properties</i></p>	<p>Underground Storage Tank (UST) and Aboveground Storage Tank (AST) databases are provided by the SWRCB. Inclusion on these lists is for permitting purposes and is not indicative of a release.</p>	<p>The site at 6280 East 2nd Street is listed on this database as “vacant/demolished” (formerly Tosco #3 0865). The listing does not provide any additional information. The Mobil #18-13005 (BT7) at 6401 East Pacific Coast Highway, across PCH from the northeast corner of the project site, was listed on this database. The listing does not provide additional information. Both the project site and the Mobil facility are listed on the LUST database and discussed in the 2004 Phase I ESA.</p>
<p>State Voluntary Cleanup Programs (VCPs): <i>Distance Searched – ½ mile</i></p>	<p>The State VCPs database lists low threat level properties with either confirmed or unconfirmed releases. The VCP database includes sites in which the site owner/operator has requested that the DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC’s costs.</p>	<p>The project site is not listed on this database. The Oakwood Apartments at 333 First Street, approximately 0.4-mile southeast and cross-gradient of the site is listed. The listing is similar to the CERCLIS listing and indicates that the facility type is “voluntary cleanup.” The most recent completed information was a remedial investigation report in 2010. Based on the distance and direction of this facility, it would not be considered an environmental concern of adverse impact to the project site.</p>

Source: Ninyo & Moore, “Hazardous Materials Evaluation,” October 2010

(2) Interim Remedial Action Plan

On behalf of ConocoPhillips Company, URS prepared an Interim RAP for the former on-site 76 Service Station No. 5379 (included in Appendix F of this EIR) in October 2009. This property, as previously noted, is located on the northeast corner of the project site and is an open LUST case (Case Number 908070325) with the RWQCB as a result of petroleum hydrocarbon contamination in soil and groundwater originating from former leaking gasoline and diesel fuel USTs and associated fuel dispensers. Background information provided in the Interim RAP indicates that numerous site investigations were performed from 1985 through 2009 to investigate soil and groundwater contamination. Groundwater monitoring was conducted at the site since 1996.

Table IV.F-2

Former On-Site Oil Wells

Well No.	Well Status
San Gabriel #4	November 1958, well abandoned with top most wooden plug placed in casing at a depth of 45 feet below ground surface and filled to surface with concrete and covered by a welded steel plate. The well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas.
San Gabriel #11	October 1953, well abandoned with top most wooden plug placed in casing at a depth of 28 feet below ground surface and filled to surface with concrete and covered by a welded steel plate. The well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas.
San Gabriel #17	October 1945, well abandoned with top most wooden plug placed in casing at a depth of 385 feet below ground surface and filled to with concrete to 365 feet below ground surface. The well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas. Note that this abandoned well probably had open casing from 365 feet below ground surface to the surface at the time of abandonment and may pose a threat for methane accumulation in the well casing.
San Gabriel #20	August 1956, well abandoned with top most wooden plug placed in casing at a depth of 15 feet below ground surface and filled with concrete and covered by a welded steel plate. The well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas.
San Gabriel #24	August 1959, well abandoned with top most wooden plug placed in casing at a depth of 30 feet below ground surface and filled to surface with concrete and covered by a welded steel plate. Records indicate that the well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas.
San Gabriel #55	August 1973, well abandoned with top most section of well casing from 223 feet below ground surface and filled to surface with concrete and covered by a welded steel plate. The well abandonment plug placement and concrete testing were witnessed and approved by the State of California Department of Natural Resources, Division of Oil and Gas.

Source: Ninyo & Moore, "Hazardous Materials Evaluation," October 2010

The purpose of the Interim RAP is to remove hydrocarbon contamination within the vadose zone (i.e., below the ground's surface but above groundwater level) and the groundwater at the site using mobile Dual-Phase Extraction (DPE). A DPE system removes and treats contaminated groundwater and VOCs in soil vapor that can continue to contaminate groundwater and pose a health risk to site users. The Interim RAP proposed that three DPE events of 48-hour to 72-hour duration be conducted. Once the DPE has been completed, shallow soil confirmation sampling would be conducted. Based on the results of the confirmation sampling, additional remedial activities in the form of shallow soil excavation may be warranted. The DPE schedule would be completed in approximately two to three months. Shallow soil confirmation sampling should be completed within two weeks after completion of DPE. A remedial action completion report would be completed within approximately two weeks thereafter. The total timeline outlined for the completion of the Interim RAP would be approximately four months.

As indicated in the Interim RAP, the vadose zone and groundwater at the site in the vicinity of the former gas station has been impacted with petroleum hydrocarbons and therefore is considered a REC at the site. The Interim RAP has not been implemented at the project site as of October 2010.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of hazards and hazardous materials impacts is focused on the proposed project's potential to adversely affect, or be affected by, physical hazards or health risks associated with identified hazardous materials. In order to most accurately characterize existing conditions on and near the project site, various investigations and studies have been performed by a number of consultants, the results of which are summarized above under Existing Conditions. Based on the results of these studies, specific environmental hazards, or RECs, have been identified that have the potential to adversely affect the project site by posing a health risk to people living and working on the property.

b. Significance Thresholds

A project may have a significant impact with respect to hazards and hazardous materials if it would exceed any of the prescribed significance thresholds included in Section VIII, Hazards and Hazardous Materials, in Appendix G of the CEQA *Guidelines*. As such, the proposed project would result in a significant impact associated with hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. 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;
3. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would create a significant hazard to the public or environment;

4. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
5. 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;
6. 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;
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
8. 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.

All of these significance thresholds were preliminarily evaluated in the proposed project's Initial Study, which is included as Appendix A of this EIR. The Initial Study determined that the proposed project would have no impact with respect to threshold Nos. 4 through 8 and therefore no further study of these thresholds was required in the EIR. Below, the remaining thresholds (i.e., Nos. 1-3) are used to further analyze the severity of the proposed project's potential impacts with respect to hazards and hazardous materials.

c. Analysis of Project Impacts

(1) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Excavation and grading activities would involve the off-site transport and disposal of hazardous materials associated with existing soil and groundwater contamination on-site, as discussed in greater detail below. Off-site transport and disposal of contaminated materials would be short-term in nature, only occurring during excavation and grading activities, and would be subject to federal, State, and local health and safety regulations that protect public safety. Handling, transport, and disposal of these materials are regulated by DTSC, the Cal EPA, California Occupational Safety & Health Administration (Cal OSHA), the Los Angeles County Health Department, and the Long Beach Fire Department. The project construction contractor would also be subject to the requirements of DTSC governing removal actions. DTSC requirements require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential exposure during hazardous materials removal actions. With adherence to the requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. As such, impacts related to the temporary off-site hauling and disposal of excavated materials during project construction would be less than significant. Given the nature of the proposed mixed-use development, operation of the proposed project would not involve the routine transport, use, or disposal of hazardous materials, and therefore operational impacts would be less than significant.

(2) 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?

Project construction includes the demolition of existing buildings and removal of existing debris and structures, excavation and grading of the project site for the subterranean parking garage, and construction of proposed structures. As previously indicated, the project site is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 due to leaking petroleum products from historic use of the site for oil extraction, distribution, and as a gas station. Records also indicate that a former Los Angeles County Flood Control landfill may be located on-site. Additionally, building components in structures on-site contain hazardous building materials, such as ACMs and LBP. These hazardous materials, which have been identified in site-specific hazardous materials investigations, would pose an environmental risk to construction workers and the public if released into the environment during demolition, clearing, and excavation of the project site.

Given the known presence of hazardous materials such as ACMs and LBP in building components on-site, the demolition of existing structures could result in a release of these hazardous materials into the environment which would pose a health risk to construction workers on-site or the general public in proximity to the project site. Therefore, demolition of on-site structures could create a significant hazard to the public or the environment through the release of hazardous materials (ACMs and LBP) into the environment, which is considered a potentially significant impact. Mitigation Measure F-2 is provided below to address this impact.

Following demolition of the project site's existing structures and removal of all demolition debris, excavation and grading has the potential to encounter petroleum hydrocarbon contamination, which is known to exist in on-site soil and groundwater. Therefore, construction workers and the public could be exposed to contaminants associated with gasoline, diesel fuel, and VOCs from existing off-site and former on-site gas station uses. Additionally, earthmoving and excavation activities could also expose workers and the public to crude oil, VOCs, and other gases (e.g., methane and hydrogen sulfide) associated with former on-site oil wells and oil field-related activities throughout the site, as well as existing and former crude oil pipelines within the Tidelands Oil Easement along the northeast site boundary with PCH. Furthermore, records have indicated that a former landfill may be located on the project site, and therefore materials disposed of in the landfill may be encountered during grading and excavation. It is not known what materials were disposed of in the landfill when it was operational, but the potential exists that such materials could be hazardous and pose a health risk to the public if exposed to the environment. In summary, petroleum hydrocarbons, VOCs, and soil gases from gas station uses and oil field-related activities, as well as potentially hazardous substances within the former on-site landfill (if located on the site), could pose a hazard to the public or the environment through the release of hazardous materials into the environment, which is considered a potentially significant impact. However, Mitigation Measures F-1 and F-3 through F-13 are provided below to address this impact.

It should be noted that impacts associated with hazardous materials releases are limited to construction activities. This is because without adequate remediation and associated site clearance by regulatory agencies such as the RWQCB, no certificate of occupancy would be issued for the proposed uses. Accordingly, the proposed project effectively could not operate without remediation of on-site contamination, and therefore operation of the proposed project would not 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.

(3) 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 create a significant hazard to the public or environment.

Impacts related to hazardous materials sites listed in various government agency databases are primarily associated with the presence of hazardous materials at these locations that could pose a health risk to people living or working in the area. In the case of the proposed project and the project site, government database searches have demonstrated that the site itself is listed in the LUST database for previous hydrocarbon releases from leaking underground fuel tanks, and the Mobil station across PCH from the site is also listed for similar releases from leaking tanks. While numerous sites were located within the various search radii around the project site, the on- and off-site gasoline stations are the only listings deemed to have the potential to adversely affect the site. As such, impacts related to hazardous materials sites have already been addressed in the preceding discussion, as the release of hazardous materials from these sites is the subject of the impact analysis. Therefore, although the proposed project is located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, impacts related to listed hazardous materials sites would be less than significant.

4. MITIGATION MEASURES

Based on the conclusions and recommendations in the hazardous materials studies included in Appendix F of this EIR, the following mitigation measures are recommended to address hazardous materials impacts:

a. Hazards Resulting from Hazardous Materials Releases

The following mitigation measures are provided to address impacts related to hazardous materials releases, and are based on the nine recommendations provided in the Hazardous Materials Evaluation (included in Appendix F of this EIR), and listed above under Subsection (b)(1). **Table IV.F-3, Relationship of Mitigation Measures to Hazardous Materials Recommendations**, below, summarizes which mitigation measure addresses each of the recommendations.

(1) Mitigation Measures To Be Implemented Prior To Construction

Mitigation Measure F-1 – Soil Management Plan: The developer shall prepare a project-specific Soil Management Plan (SMP) that will be reviewed and approved by the City of Long Beach prior to the start of construction. The SMP will function as an umbrella plan. It shall incorporate all of the requirements associated with the mitigation measure below, and will include, but not be limited to the findings and recommendations contained in the: (1) Geophysical Survey; (2) Soil Vapor Survey/Health Risk Screening, (3) Transportation Plan; and (4) Dust Monitoring Plan. The SMP will incorporate methodologies for detecting the various environmental concerns noted in relevant hazardous materials investigations during the construction phase of the project. The SMP shall include measures to address each environmental concern, if encountered, according to the applicable regulatory standards and the mitigation measures contained herein. In addition, the SMP shall require notification and reporting, according to agency protocols, of applicable local and State regulatory agencies, including the Department of Toxic

Substances Control (DTSC), the Regional Water Quality Control Board (RWQCB), CalRecycle, California Department of Oil and Gas and Geothermal Resources, Long Beach Fire Department, and the City of Long Beach.

Table IV.F-3

Relationship of Mitigation Measures to Hazardous Materials Recommendations

Hazardous Materials Recommendation	Mitigation Measure Addressing Recommendation
1. A geophysical survey of the Tidelands Oil Easement along PCH to determine pipeline locations and to determine if pipelines were associated with previous oil wells on-site.	Addressed by Mitigation Measure F-3, below.
2. A soil gas survey for methane, hydrogen sulfide, and volatile organic compounds (VOCs) in the area of the abandoned oil well No. 4.	Addressed by Mitigation Measure F-4, below.
3. Install three groundwater monitoring wells along the Tidelands Oil Easement to assess crude oil and petroleum impacted groundwater.	Addressed by Mitigation Measure F-6, below.
4. Sample the three existing and the three proposed groundwater monitoring wells for parameters for discharging groundwater during dewatering construction activities.	Addressed by Mitigation Measure F-6, below.
5. Collect soil samples for petroleum impacted soil of the oil sumps in the northern area of the site and in the area of suspected mud pit and/or areas of stained soil noted by others in aerial photographs.	Addressed by Mitigation Measure F-7, below.
6. ACMs and LBP-containing materials should be abated by a qualified contractor under current guidelines.	Addressed by Mitigation Measure F-2, below.
7. If a dewatering system is installed at the site during redevelopment, a vertical barrier should be installed around the western and southern boundaries of the former 76 Service Station #5379 to reduce the lateral migration of petroleum impacted groundwater to the rest of the site. Groundwater from a dewatering system will need to be permitted through the Los Angeles RWQCB and if necessary, discharge would need to be treated.	Addressed by Mitigation Measures F-6 and F-8, below.
8. Oil wells located on the site will need to be re-abandoned in accordance with current Department of Oil, Gas, and Geothermal Resources (DOGGR) regulations.	Addressed by Mitigation Measure F-10, below.
9. Observations should be made during site development for other areas of contamination. If materials are encountered further investigation may be warranted.	Addressed by Mitigation Measure F-9, below.

Source: PCR Services Corporation, 2011

Mitigation Measure F-2 – Asbestos and Lead-Based Paint Abatement: Prior to demolition activities, a qualified contractor shall perform an asbestos and lead-based-paint-containing-materials survey. Thereafter, the qualified contractor shall also sufficiently abate the structures to be demolished on the site according to the applicable and current local, State, and federal guidelines.

Mitigation Measure F-3 – Geophysical Survey: Prior to subsurface disturbance and demolition at the project site, the developer shall conduct a geophysical survey. The purpose of the geophysical survey is to locate subsurface features or anomalies, if any, that may pose an environmental concern or present a risk of upset at the site. The geophysical survey shall:

- 1) Accurately locate and mark the oil pipeline located along the northeast border of the site.
- 2) Search for, identify and mark the six abandoned oil wells and associated pipelines that are reportedly located at the project site due to historic use of the site for oil production and facilities.
- 3) Detect the presence of other subsurface anomalies, if any, such as underground vaults/features, buried debris, historical dump sites, waste drums, or tanks.

The geophysical survey will inform the site construction and remediation activities so as to remove or avoid subsurface hazardous materials or associated facilities. The results of the geophysical survey shall be included in the SMP, which shall be reviewed and approved by the City of Long Beach.

Mitigation Measure F-4 – Soil Vapor Survey and Health Risk Screening:

(A) Soil Vapor Survey: The developer shall conduct a systematic soil vapor survey of the project site prior to construction to investigate the possible presence of VOCs in site soils. The survey will be performed according to the applicable standards of the DTSC and California Environmental Protection Agency (CalEPA). Soil borings shall be placed to a depth of at least five feet below the deepest excavation to occur during site construction and soil vapor samples shall be collected at five-to-ten-foot intervals. Soil samples shall also be collected at a five-foot interval from the soil borings to assess the soil for heavier petroleum hydrocarbons that may be present due to past oil field use of the site. The survey shall specifically include:

- 1) an evaluation of methane and hydrogen sulfide concentrations (due to possible methane and hydrogen sulfide gases associated with historic oil fields use) to a depth of at least five feet below the deepest excavation to occur during site construction. These soil vapor borings shall be placed in the vicinity of any abandoned oil wells located during the geophysical survey; and
- 2) additional soil vapor borings to test for VOCs on and in the vicinity of the land area where the former on-site gas station was located; and in locations where the

off-site gas station may have impacted the site through lateral migration of soil vapors.

(B) Health Risk Screening: Following completion of the soil vapor survey, a qualified environmental professional shall use the results of the survey to develop a health risk screening that assesses health and safety concerns associated with VOC levels at the site for construction workers and future site users. The health risk screening assessment will be performed according to the applicable standards of the DTSC and CalEPA. If the health risk screening assessment indicates that elevated VOCs in soil pose a health risk to site users, then the developer will further define and implement additional measures, tailored to the extent of environmental contamination, that minimize soil vapor exposure to acceptable levels as established by the applicable regulatory agency, including DTSC. The potential mitigation measures could include, but not be limited to, the following:

- 1) During Construction – VOC levels shall be monitored closely during construction in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1166. This rule requires VOC monitoring of petroleum-impacted soils during construction activities. If VOC concentrations exceed threshold levels specified in the Rule, vapor suppression shall be required by amending soil with water or chemical foam. VOC-impacted soil shall be stockpiled and covered in accordance with the Rule. Rule 1166 compliance requirements shall be included in the SMP required by Mitigation Measure F-1 above.
- 2) Post-Construction – In the unlikely event that elevated concentrations of VOC persist in site soils post-construction, vapor mitigation shall be performed to protect future site users. Post-construction long-term vapor mitigation measures selected shall be determined based on the remaining extent of VOC concentrations and the associated health risk, if any. Mitigation measures associated with post-construction VOC control could include the following:
 - i) Soil Vapor Extraction - post-construction vapor mitigation would include a soil vapor extraction (SVE) system to remove residual VOCs from the soil. The SVE system would be employed to remediate soil vapor to a level consider safe for uses proposed on the site.
 - ii) Vapor Barrier/Sub-slab Depressurization – If the soil vapor survey indicates that extremely high VOCs are present at the site, post-construction, resulting in elevated human health risk, a vapor barrier and sub-slab depressurization system shall be designed and implemented for the proposed buildings to be constructed at the site.

Mitigation Measure F-5 – Pre-Construction Removal Action: The developer shall perform pre-construction removal to include sampling, as necessary to characterize waste, removal action, off-site disposal of characterized waste and confirmation sampling of removal areas. The specific area to undergo pre-construction removal action includes:

- 1) Removal of Debris and Dirt from Satellite Enclosure: Debris and dirt located in a satellite enclosure on the southern portion of the site shall be removed prior to

site construction. The mitigation shall include collection and laboratory analysis of representative soil samples from the debris and dirt to characterize the waste for off-site disposal purposes. Based on the laboratory analysis and waste characterization, the soil and debris shall be disposed of at an appropriate facility.

Mitigation Measure F-6 – Construction De-Watering Permit: From review of previous environmental reports regarding the project site, groundwater at the site has likely been impacted by petroleum hydrocarbons from one or more possible sources including the former gas station on the project site, the petroleum release from the gas station located across PCH from the site, and former oil field activities. Dewatering will be required during site construction. As such, the developer shall obtain a De-Water permit through the Regional Water Quality Control Board (RWQCB) to de-water and discharge water from the site. The developer will comply with all requirements of the de-watering permit. Petroleum impacted groundwater is subject to pre-treatment during de-watering activities to meet National Pollutant Discharge Elimination System (NPDES) Construction Dewatering permit limits. The construction activities shall conform to the NPDES requirements. The RWQCB requires the water to be tested for possible pollutants. The developer shall collect groundwater samples from existing site wells to determine pre-treatment system requirements for extracted groundwater. A water treatment system shall be designed and installed for treatment of extracted groundwater removed during dewatering activities so that such water complies with the applicable RWQCB and NPDES permit standards before disposal.

(2) Mitigation Measures To Be Implemented During Site Demolition and Construction

The SMP required by Mitigation Measure F-1 would be implemented during site demolition and construction to address several environmental concerns noted in the site-specific hazardous materials studies included in Appendix F of this EIR. Details of mitigation measures to be implemented during site demolition and construction include the following:

Mitigation Measure F-7 – Oil Sumps and Mud Pits: The previously identified oil sumps in the northern area of the site and the area of suspected mudpits and any known areas of dark stained soil noted in historical aerial photographs shall be added to site plans included in the SMP. These areas shall be excavated and the soil stockpiled on plastic sheeting at the site. The stockpiled soil shall be sampled and laboratory-analyzed in accordance with requirements outlined in the SMP and pursuant to the applicable DTSC guidelines. The stockpiled soil shall be characterized in accordance with the laboratory analysis and disposed of at a facility that is licensed to accept the soil based on established site action levels.

Mitigation Measure F-8 – Construction Dewatering: Construction dewatering requirements as outlined in the Construction Dewatering permit shall be included in the SMP. Construction dewatering shall be performed in accordance with the permit and SMP during site construction and demolition activities.

Mitigation Measure F-9 – Construction Site Observer: A qualified construction site observer shall be present at all times during site excavation activities to observe for areas of possible contamination including, but not limited to, the presence of underground anomalies such as underground structures, pipelines, buried debris, waste drums, tanks, stained soil or

odorous soils. The SMP shall provide notification protocols and specific instructions regarding the actions to be taken (i.e., sampling, testing for contamination levels, excavation and stockpiling, or halting construction for remediation) if subsurface anomalies are encountered during construction. Specific instructions shall include field monitoring to assess any safety concerns associated with the subsurface anomaly, environmental sampling, reporting requirements, removal and confirmatory sampling. Removal action of subsurface anomalies shall be documented by the construction site observer in the daily field log including documenting all actions taken in accordance with the SMP, including photo documentation.

Mitigation Measure F-10 – Abandoned Oil Wells: Mitigation measures associated with the six known on-site abandoned oil wells shall be provided in the SMP (required by Mitigation Measure F-1), including actions to perform in the event that an abandoned oil well is encountered during construction activities. A summary of these mitigation measures include the following:

- 1) The developer shall submit the appropriate project application documents to DOGGR to comply with its Construction Site Review process. Thereafter, DOGGR will notify the applicant of required procedures, including re-abandonment permits and procedures, and possible methane mitigation measures.
- 2) Known abandoned oil wells shall be uncovered during construction without disturbing the casing.
- 3) A DOGGR inspector shall be notified to inspect the well and provide, if necessary, re-abandonment measures.
- 4) The well shall be re-abandoned by a licensed contractor in accordance with current regulatory requirements of DOGGR.
- 5) The construction site observer shall be on the look out at all times during site excavation for abandoned oil wells. Actions to be taken to monitor the abandoned oil well with field instrumentation to assess any safety concerns shall be included in the SMP.

Mitigation Measure F-11 – Former LA County Flood Control Dump Site: If, during construction, a dump site is discovered, then the developer shall implement tailored mitigation to remove the dump materials during site construction activities. Response actions to be taken by the contractor if the former dump is encountered shall be provided in the SMP (required by Mitigation Measure F-1) and may include removal through excavation of dump debris, staging of the debris on plastic, monitoring of the excavation for landfill gas, debris loading and disposal in an off-site permitted facility.

Mitigation Measure F-12 – Soil Transportation Plan: The developer shall develop a Soils Transportation Plan in compliance with state of California and federal Department of Transportation requirements for the safe and legal transport to an off site disposal facility for hazardous materials that may be encountered during construction activities.

Mitigation Measure F-13 – Dust Monitoring Plan: The developer shall provide a Dust Monitoring Plan in accordance with the requirements of South Coast Air Quality Management District (SQAQMD) Rule 403 to monitor and control fugitive dust that may be generated as a result of construction activities through application of Best Available Control Measures during construction.

5. CUMULATIVE IMPACTS

The project site is located within an urbanized area with adjacent land uses that include numerous commercial uses to the north, east, and south, residential uses to the northwest, and a public marina and boat yard to the west. Any off-site properties, including those included as cumulative development sites, listed in government hazardous materials databases would require investigations and remediation (if necessary) to adequately address existing contamination, to the satisfaction of affected regulatory agencies, thereby precluding the potential for adverse physical effects related to hazardous materials health risks. For instance, soil and groundwater contamination at any of the related project sites would be subject to oversight by the RWQCB, SCAQMD, and CalEPA's Department of Toxic Substance Control (DTSC), as appropriate, while conditions related to oil wells would be subject to oversight by the California Department of Oil and Gas and Geothermal Resources. Additionally, some businesses in the project vicinity could transport, use, handle, or store various hazardous materials. As appropriate for these nearby land uses, consistent with Chapter 69.5 of the California Health and Safety Code, Business Emergency Plans (BEPs) have been filed with the Long Beach CUPA. In addition, the transport of hazardous materials on the roadways surrounding the project site is required to occur consistent with Title 49 of the Code of Federal Regulations. Given compliance with applicable mitigation measures for the proposed project and standard regulatory requirements, the proposed project, in conjunction with other related cumulative projects, would not result in significant cumulative impacts related to the release of hazardous materials into the environment or impacts from listed hazardous materials sites, and the project's contribution to such impacts would not be cumulatively considerable.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the proposed project would result in less than significant impacts relative to the off-site transport and disposal of hazardous materials, but would result in potentially significant impacts relative to hazardous materials releases during construction activities, due to the potential for exposure of construction workers and the public to health risks associated with known soil and groundwater contamination, oil field-related contamination and infrastructure, the presence of ACMs and lead, and the potential existence of a former landfill. However, mitigation measures F-1 through F-13, above, would serve to reduce such impacts to less than significant.