
5.7 HAZARDOUS WASTE AND MATERIALS

5.7.1 Environmental Setting

Hazardous wastes are hazardous materials that have been discharged, spilled, contaminated; are being discarded as no longer of practical use, have an expired shelf-life; or are being stored prior to proper disposal.

In compliance with CEQA and the State CEQA Guidelines, a more specific description of types of impacts is considered, including foreseeable accidents involving hazardous materials releases, handling of acutely hazardous materials within a quarter mile of a school (Public Resources Code Section 21151.4), and interference with emergency response plans and emergency evacuation plans. CEQA also requires a search of databases for sites that any agency has identified as having been contaminated by hazardous materials releases (Public Resources Code Section 21092.6). A detailed report is provided in Appendix G of this EIR.

The environmental setting of the Project area is determined by performing a site reconnaissance, researching historical use, storage, or disposal of hazardous materials or petroleum products, reviewing previous environmental reports, and reviewing databases generated by regulatory agencies. The site reconnaissance revealed that most of the properties alongside the proposed alignments are residential.

Abandoned oil wells are located along the proposed alignment routes. Therefore, this section also addresses risks that could result from exposure to toxic chemicals as a result of potential accidental releases of methane gases in quantities sufficient to result in fires or explosions that could cause injury, or the accidental release of hydrogen sulfide (H₂S) gas, an acutely hazardous substance (Figure 5.7-1).

Historical Sanborn Maps were obtained from the Los Angeles Public Library website. The maps dated from 1950 (updated from 1918) and showed most of the proposed alignment route along Pacific Avenue. The east-west trending area displayed extended from the edge of the beach just west of Ocean Front Walk to just east of Ballona Lagoon (Grand Canal). The north-south trending area of coverage extended from 34th (Catamaran) Avenue in the north to roughly the end of Del Rey Lagoon (Lake Del Rey), also showing a portion of Culver Boulevard and the area north of Esplanade to the Los Angeles County boundary. Copies of the maps reviewed are included in Appendix G of this EIR.

Most of the area is depicted as occupied by residential development or undeveloped lots. The area occupied by the VPP is not depicted. The lots shown to the north of Pacific Avenue from 39th (Hurricane) Avenue to 41st Avenue are undeveloped. Oil wells are shown at the terminus of 41st Avenue and at the southeast corner of 41st and Pacific Avenue, as well as across the lagoon between 41st and 42nd avenues. Oil wells and derricks are depicted along the west side of the lagoon, south of 42nd Avenue (with two storage tanks) and 44th Avenue. Almost every city block from Pacific Avenue to Ocean Front Walk is developed with at least one oil well derrick, platform, and/or tank between 38th (Galleon) Avenue to 60th Avenue. The only businesses depicted are an unnamed store at the northwest corner of 49th (Reef) and Pacific Avenues, a life guard station at 66th Avenue and Ocean Front Walk, and a restaurant at 6615 Speedway.



LEGEND

 Oil Well Determined to be Conflicting with Alignment

Oil Well Source: California Department of Conservation, Division of Oil, Gas, & Geothermal Resources.

N

300 0 300 600 900 1200 Feet

Aerial Source: AirphotoUSA, 2004

ABANDONED OIL WELL LOCATIONS



Project No.: 29870322

Project: VENICE PUMPING PLANT DUAL FORCE MAIN EIR

Figure 5.7-1

Data regarding areas of known contamination were obtained from a variety of sources. Consistent with CEQA Section 21092.6, a search of several database lists was conducted to determine if other agencies have identified sites within, or close to, the proposed alignments as having been contaminated by hazardous materials releases.

The database report was provided by Environmental Data Resources, Inc. (EDR) and reviewed to evaluate whether activities on or near the proposed alignments have the potential to create adverse environmental impacts on the proposed project. EDR reviews databases compiled by federal, state, and local government agencies. It should be noted that this information is reported as received from EDR, which in turn, reports information as it is provided in various government databases. It is not practicable to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence.

Table 5.7-1 describes the regulatory agency databases searched, which have been reviewed for the applicable search distances as specified in American Society for Testing and Materials (ASTM) Standard E1527-00, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", at a minimum. The complete database report is provided in the Appendix G of this EIR.

The topography in the vicinity of the site slopes generally to the southwest. Surface water flow would generally follow the topographic gradient and flow to the southwest. According to groundwater well data obtained from the Los Angeles County of Public Works, Water Resources Division, deep groundwater flows to the south-southwest. Therefore, sites located generally to the northeast of the proposed alignments are considered to be hydrologically upgradient.

Listed facilities identified close to, or upgradient of, each of the proposed alignments within the database search radii indicated above are identified in Table 5.7-2. The final column in the table assigns a potential for each database listing of a given facility to represent a risk in any proposed alignment. The potential is classified as "Low", "Medium", or "High" based upon the facility's distance relative to the proposed alignments and projected groundwater gradient; and its regulatory status on that particular database. Facility listings representing a moderate or high potential for environmental concern at the proposed alignments are further discussed after the table.

Table 5.7-1 Regulatory Database Descriptions and Corresponding ASTM Search Distances

Type of Database/Date	Description of Database	Radius Searched
Required Federal Database Listings		
NPL	The National Priorities List (NPL) identifies uncontrolled or abandoned hazardous waste sites. To appear on the NPL, sites must have met or surpassed a predetermined hazard ranking system score, been chosen as a state's top priority site, pose a significant health or environmental threat, or be a site where the EPA has determined that remedial action is more cost-effective than removal action.	1.0 mile
CORRACTS	Resource Conservation & Recovery Act (RCRA) facilities ordered to implement corrective actions.	1.0 mile
CERCLIS	The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database identifies hazardous waste sites that require investigation and possible remedial action to mitigate potential negative impacts on human health or the environment.	0.5 mile
RCRA TSDs	RCRA treatment, storage, or disposal (TSD) sites.	0.5 mile
CERCLIS- NFRAP	No Further Remedial Action is Planned (NFRAP) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for these sites and they have been removed from CERCLIS list based on findings of site investigations.	Site and Adjoining
RCRA Generators	RCRA regulated hazardous waste generator notifiers list; both large quantity and small quantity generators are included in this list.	Site and Adjoining
ERNS	EPA's Emergency Response Notification System (ERNS) list contains reported spill records of oil and hazardous substances.	Site
Supplemental Federal Database Listings		
CONSENT	Superfund (CERCLA) Consent Decrees by the Department of Justice. Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.	1.0 mile
ROD	Record of Decision (ROD) documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.	1.0 mile
DELISTED NPL	NPL Deletions. The National Oil and Hazardous Substances Pollution Contingency Plan establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 Code of Federal Regulations (CFR) 300.425 (e), sites may be deleted from the NPL where no further response is appropriate.	1.0 mile
DOD	Department of Defense (DOD) Sites. This data set consists of federally owned or administered lands, administered by the DOD, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.	1.0 mile
INDIAN RESERVE	This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.	1.0 mile
FUDS	Formerly Used Defense Sites (FUDS). The listing includes locations of FUDS properties where the USACOE is actively working or will take necessary cleanup actions.	1.0 mile
US ENG CONTROLS	Engineering Controls Sites List. A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.	0.5 mile
ODI	Open Dump Inventory (ODI). An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.	0.5 mile
UMTRA	Uranium Mill Tailings Sites. Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.	0.5 mile
FINDS	The Facility Index System (FINDS) database identifies different databases that contain information regarding federally listed sites.	Site and Adjoining
MINES	Mines Master Index File. Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.	Site and Adjoining
TSCA	Toxic Substances Control Act (TSCA). TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.	Site and Adjoining

Type of Database/Date	Description of Database	Radius Searched
SSTS	Section 7 Tracking Systems. Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the EPA by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.	Site and Adjoining
TRIS	The Toxic Release Inventory System (TRIS) database identifies facilities that release toxic chemical to the air, water, or land in reportable quantities.	Site and Adjoining
FTTS	Tracks administrative cases and pesticide enforcement actions and compliance activities related to the Federal Insecticide, Fungicide, and Rodenticide Act, the TSCA, and the Emergency Planning and Community Right-to-Know Act.	Site and Adjoining
HMIRS	The Hazardous Material Information Reporting System records of spills or hazardous materials incidents reported to the Department of Transportation.	Site
MLTS	Material Licensing Tracking System (MLTS). The MLTS is maintained by the Nuclear Regulatory Commission (NRC) and contains a list of approximately 8,100 sites, which possess or use radioactive materials and which are subject to NRC licensing requirements.	Site
NPL LIENS	Federal Superfund Liens. Federal Superfund Liens. Under the authority granted the EPA by the CERCLA of 1980, the EPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. EPA compiles a listing of filed notices of Superfund Liens.	Site
PADS	Polychlorinated Biphenyl (PCB) Activity Database System. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCBs who are required to notify the EPA of such activities.	Site
RAATS	RCRA Administration Action Tracking System (RAATS). RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.	Site
Required State Database Listings		
AWP/ Former BEP	Annual Work Plan (formerly known as Bond Expenditure Plan [BEP]) sites – known hazardous waste sites targeted for cleanup. This is the state-equivalent to the NPL.	1.0 mile
CalSites	The CalSites database contains potential or confirmed release properties. This is the state equivalent to CERCLIS.	0.5 mile
VCP	Voluntary Cleanup Program sites – low-threat sites with either confirmed or unconfirmed releases and that have requested DTSC oversight and cleanup activities and have agreed to cover cleanup costs. (Similar to Brownfields sites below)	0.5 mile
TOXIC PITS	Toxic Pits Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.	0.5 mile
STATE LANDFILL	Solid Waste Information System. Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.	0.5 mile
WMUDS/SWAT	State inventory of solid waste disposal and landfill sites.	0.5 mile
LUST	List of information pertaining to all reported leaking underground storage tanks (LUSTs). This includes listings at the state and local level.	0.5 mile
Cortese	The Hazardous Waste & Substances Sites list identifies older LUST sites and sites listed by the Department of Health. It is no longer updated.	0.5 mile
INDIAN LUST	LUSTs on Indian land in Arizona, California, New Mexico and Nevada.	0.5 mile
CA UST	State listing of active underground storage tank (UST) sites.	Site and Adjoining
INDIAN UST	USTs on Indian land in Arizona, California, New Mexico and Nevada.	Site and Adjoining
CA FID UST	State listing of active and inactive UST sites. This list is no longer updated.	Site and Adjoining
HIST UST	State listing of historical UST sites. This list is no longer updated.	Site and Adjoining

Type of Database/Date	Description of Database	Radius Searched
NOTIFY 65	Proposition 65 Notification Records. The NOTIFY 65 list contains facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk.	Site and Adjoining
CHMIRS	The California Hazardous Material Incident Report System records of spills or hazardous materials incidents.	Site
Supplemental State and Local Database Listings		
SLIC	The Regional Water Quality Control Board issues this list of sites with non-tank spill, leaks, investigations, and cleanups.	0.5 mile
Brownfields	Database of low-threat properties with either confirmed or unconfirmed releases that have requested DTSC oversight and cleanup activities and have agreed to cover cleanup costs. (Similar to VCP sites above)	0.5 mile
DEED	Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.	0.5 mile
City of L.A. Landfills	The City Engineering and Construction Division maintain a list of landfills within city limits.	0.5 mile
L.A. County SWLF	The Los Angeles County Department of Public Works maintains a list of historic, current, and potential landfills within the county.	0.5 mile
WDS	The State Water Resources Control Board generates this list of industrial wastewater dischargers.	Site and Adjoining
HAZNET	Facility and manifest data is gathered for this database from hazardous wastes manifests that are submitted to DTSC.	Site and Adjoining
EMI	Database of facilities reporting toxic and criteria pollutant emissions data to the local air pollution agencies.	Site and Adjoining
NFA	No Further Action Determination. This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.	Site and Adjoining
REF	Unconfirmed Properties Referred to Another Agency. This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.	Site and Adjoining
SCH	School Property Evaluation Program. This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.	Site and Adjoining
NFE	Properties Needing Further Evaluation. This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.	Site and Adjoining
Dry Cleaners	EDR compiles a database of dry cleaning facilities based on their having a hazardous waste generator ID and certain SIC codes.	Site and Adjoining
L.A. County HMS	The Los Angeles County Department of Public Works maintains a listing of files they maintain for sites with USTs or facilities with industrial wastewater permits.	Site and Adjoining
Site Mitigation List	The L. A. County Department of Public Health maintains a listing of industrial sites that have had some sort of spill or complaint.	Site and Adjoining
AST	Registered Aboveground Storage Tanks.	Site

Table 5.7-2 Regulatory Database Findings for Proposed Venice Force Main Alignments

EDR Map ID	Facility Name Address	Proximity to Via Marina Alignment Alternative	Proximity to Pacific Ave Alignment Alternative	Proximity to Beach Alignment Alternative	Database Lists	Description	Current Agency Status	Recognized Environmental Condition Potential
5	LA Pumping Plant #46 140 Hurricane Street	On site	On site	On site	RCRS-SQG	Small quantity generator of hazardous waste	No violations reported	Low
					Notify 65	Site has notified the State Water Resources Control Board that a release of hazardous substances could potentially impact drinking water	Not applicable-notification only	Low
					FINDS	Included on RCRIS	Not provided	Low
18	7332 Vista Del Mar	On site	On site	On site	ERNS	Sewer collapsed on 4/17/1992; release to land only.	Not provided	Low
7	Timberlake Group Int'l 4100-5000 Pacific	Approx. 900 feet southwest	On site	Approx. 500 feet northeast	CA SLIC	Total petroleum hydrocarbons (TPH) contamination	Case closed	Low
11	S. California Gas Co. 5400 Pacific Avenue	Approx. 900 feet southwest	On site	Approx. 500 feet northeast	CA SLIC	TPH contamination	Case closed	Low
					HAZNET	Generator of contaminated soil from site cleanup	Not provided	Low
Unmapped	S. California Gas Co. 143 Union Jack	Approx. 700 feet southwest	Approx. 200 feet northeast	Approx. 700 feet northeast	CA SLIC	TPH contamination	Case closed	Low
12	OHN Kearney 6512 Pacific Avenue	Approx. 1000 feet southwest	On site	Approx. 400 feet northeast	HAZNET	One-time generator of asbestos-containing waste.	Not provided	Low
8	Unocal #0407 13800 Bora Bora Way	Approx. 0.25 mile east	<0.25 mile east	<0.25 mile east	Cortese	Leaking UST site	Not provided	Low
					LUST	Release of gasoline to groundwater in 1991 as a result of piping failure. Methyl tert-butyl ether (MTBE) detected.	Case closed in 1997	Low
9	Unocal Corp SS 0407 1 Bora Bora Way (File review indicates actually same location as above)	Same as above	Same as above	Same as above	CA FID UST	UST location	Active	Low
9	Service Station No. 1 Bora Bora Way (Same as above)	Same as above	Same as above	Same as above	HIST UST	Historic UST site with 10,000-gallon Product 10,000-gallon Premium 10,000-gallon Unleaded 10,000-gallon Diesel (1) 550-gallon Waste oil (1) Unidentified contents	Not provided	Low

EDR Map ID	Facility Name Address	Proximity to Via Marina Alignment Alternative	Proximity to Pacific Ave Alignment Alternative	Proximity to Beach Alignment Alternative	Database Lists	Description	Current Agency Status	Recognized Environmental Condition Potential
9	Pegasus Carriers, Inc. (Same as above)	Same as above	Same as above	Same as above	RCRIS-SQG	Small Quantity Generator of hazardous waste	No violations reported	Low
					FINDS	Identified on RCRIS	Not provided	Low
3	Via Dolce Acquisition Area 3 3700-3706 Canal North-northwest	Approx. 1000 feet north-northwest	Approx. 1000 feet north-northwest	Approx. 1000 feet north-northwest	CA SLIC	TPH contamination	Case closed	Low
3	Via Dolce Acquisition Area 2 3600-3615 Canal North-northwest	Approx. 1000 feet north-northwest	Approx. 1000 feet north-northwest	Approx. 1000 feet north-northwest	CA SLIC	TPH contamination	Case closed	Low
4	Via Dolce Acquisition Area 1 3602 Pacific Avenue Northwest	Approx. 1000 feet northwest	Approx. 1000 feet northwest	Approx. 1000 feet northwest	CA SLIC	TPH contamination	Case closed	Low
10	Southern California Gas Company 5101 Ocean Front Walk West	Approx. 200 feet southwest	Approx. 1200 feet southwest	Less than 100 feet northeast	CA SLIC	TPH contamination	Case closed	Low
14	Del Rey Cleaners 310 Culver Blvd. Northeast	Approx. 200 feet northeast	Approx. 200 feet northeast	Approx. 2000 feet southeast	CA SLIC	Perchloroethylene, VOC (volatile organic compounds) release from non-tank source	Site assessment	Moderate
					RCRIS-SQG	Small quantity generator of hazardous waste	No violations reported	Low
					FINDS	Identified on RCRIS	Not provided	Low
					HAZNET	Generator of hazardous waste: Halogenated solvents; Liquids with halogenated organic compounds >1,000 milligrams per liter.	Not provided	Low
					Cleaners	Dry cleaning establishment	Not provided	Low

According to records, there are a few hazardous materials-related sites on, or near, the proposed alignments. These have a low potential to have impacted the proposed alignments, unless contamination not yet discovered and abated is encountered during construction.

One site, Del Rey Cleaners, located approximately 200 feet north of the intersection of Culver Boulevard and Pacific Avenue, is reportedly currently undergoing site assessment activities. It is possible that contamination from that site may have migrated to the proposed alignments near Culver Boulevard. Precautions should be taken in this area to monitor for concentrations of dry cleaning fluids that may be present in the soils disturbed during construction.

The potential for facilities located more than 0.25 mile from the proposed Project alignments to have contaminated an alignment is considered low based on the relative distance of those facilities from the Project area and/or regulatory status.

5.7.2 Thresholds of Significance

A significant hazardous materials impact would occur if either direct, or indirect, changes in the environment caused by a particular Project alignment construction alternative would potentially result in one or more of the following conditions:

- Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites and as result create a substantial hazard to the public or the environment; and/or
- Exposure of construction workers to contaminated materials can be minimized by implementing the measures required by federal, state, and local laws and regulations. As such, potential impacts associated with the excavation of contaminated materials would be less than significant.

5.7.3 Environmental Impacts

The proposed Project could pose potentially significant hazard impacts. These include the potential for exposure to gas leaking from abandoned wells in areas excavated during the Project, and/or potential effects from accidental releases of hazardous substances during construction.

OIL WELL FIELD HAZARDS

Based on reports and files reviewed at the California Division of Oil, Gas, and Geothermal Resources (CDOGGR), the proposed Project alignments lie within an area of oil well field development known as the Playa Del Rey Field. Several abandoned oil wells lie either within, or within proximity of, the proposed alignments (refer to Figure G-1 in Appendix G and also see Figure 5.7-1 for locations).

As part of the existing environment, hazardous materials and wastes may be encountered at each of the abandoned oil wells within the surrounding residential community. H₂S and other odorous substances,

such as methyl mercaptan, benzene, as well as other aromatic hydrocarbons, are all byproducts of natural gas production. These toxins may be present at active or abandoned wells.

There are three types of gas that may exist within the geological and soil units underlying the Project area: biogenic (or swamp) gas, thermogenic (field) gas, and processed natural gas (or piped gas). Biogenic gases are not toxic at low (ppm) levels; however, they act as asphyxiants at high concentrations. Biogenic gases contain trace quantities of other chemicals which are toxic at low levels (in the ppm range), including benzene, toluene, ethylbenzene, and xylenes (BTEX).

Thermogenic gas and butane, as well as trace amounts of toxic gases, including H₂S, exhibit distinct chemical characteristics, which permit “fingerprinting” or differentiation between gas types. In addition to lacking heavier gas components (propane, butane, ethane, etc.), the presence of helium in detectable amounts is a primary fingerprint for natural gas imported from the central United States and previously stored in the deep storage zone.

Migration Pathways – Natural gas can migrate via a variety of manmade structures through the subsurface soil both vertically and laterally. The most common manmade structures that may serve as conduits include:

- Old abandoned oil and gas wells or dry holes;
- Previously undocumented wells and dry holes;
- Recently plugged and abandoned oil and gas wells (abandoned in accordance with current CDOGGR regulations);
- Existing water extraction or injection wells;
- Old abandoned water wells;
- Monitoring wells;
- Utility trenches;
- Stormdrain systems; and
- Sewer lines.

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

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

The potential for gas migration to reach the surface is considered to be the greatest through or along human-made structures as geologic pathways are relatively “tight” and provide less space to facilitate migration. Within the Project area, wells penetrate shallow and deep gas zones at various depths. While a poorly constructed or abandoned well can serve as a conduit for upward migration of natural gas, even when proper construction and abandonment methods have been applied, such conduits can develop as wells deteriorate over time.

RISK OF EXPLOSION

The generation, transmission, and distribution of natural gas may pose a risk of explosion. Natural gas has a flammable property that needs to be strictly regulated in order to reduce the risk of explosion to the public and the environment. Explosion can occur as a result of leakage from abandoned wells and pipelines, and/or from third party interaction with the wells, transmission lines, and distribution lines. In addition, releases of gas from the abandoned wells may occur if construction activities accidentally puncture an abandoned well, leading to a possible explosion.

POTENTIAL SPILLS OR RELEASES

Land uses along the proposed alignment alternatives include mostly single- and multiple-family residences and a restaurant. Types of hazardous materials associated with these activities would typically include mostly common household janitorial supplies.

Potential impacts associated with increases in hazardous materials use and hazardous waste generation can result from hazardous materials releases during handling or transport, interference with emergency response plans, and limited hazardous waste disposal capacity.

An increase in hazardous materials use and hazardous waste generation during construction would increase the chances of a spill or release of hazardous substances. If a spill were to occur, emergency response procedures would be implemented to contain and clean up the spill. There are regulations in place regarding such procedures, and provisions would be in place from the onset of Project activities in order to eliminate, or at least minimize, potential spills and releases that might create a hazard to the public or the environment, or result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

EXPOSURE TO CONTAMINATION

During construction, there is the potential for the disturbance of contaminated soils and groundwater that could pose a risk of exposure to construction workers, the public, and the environment as contaminants may be encountered during excavation activities. These contaminants would be expected to be petroleum-related substances given the extensive oil well development in the area; or, as discussed above, there is the possibility of contamination from other sources, such as dry cleaning establishments.

In addition, emissions of diesel particulate matter from the construction equipment would result in increased exposure near the construction activities. However, these emissions would be temporary and would not contribute significantly to chronic long-term exposure. Ongoing compliance with regulatory requirements under any alternative would provide an environment in which workers, visitors, and tenants located in, and near, the Project site would be protected.

There are a few electrical transformers located along the portions of the proposed alignments located along city streets. Should project activities require disturbance or relocation of these units, the Los Angeles Department of Water and Power records should be consulted to ascertain the potential polychlorinated biphenyl (PCB) content of the units. PCBs were commonly used in fluids contained in electrical equipment, primarily transformers and capacitors, and are known to have toxic and carcinogenic health effects. Manufacture of PCBs was completely banned in the U.S. in January 1979, and their

distribution in commerce was prohibited effective July 1979. Regulations require workers to wear protective clothing or equipment to protect dermal contact or inhalation of PCBs or materials containing PCB materials. All disposal activity of PCB material must adhere to EPA regulations. Disposal of PCB liquid and waste are also regulated at the state level.

HAZARDOUS WASTE GENERATION

Hazardous wastes generated during construction activities for each of the alignments would include miscellaneous motor vehicle fluids, potentially contaminated soil, and spent materials used during construction; such as fuels, lubricants, paints, and solvents. Hazardous wastes generated during project activities should be removed by licensed waste haulers and transported for treatment, disposal, or recycling at authorized off-site facilities.

TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS AND WASTES

Transportation of hazardous materials and hazardous wastes is strictly regulated by federal and state laws. These laws include the Hazardous Material Transportation Act of 1994, administered by the United States Department of Transportation (USDOT), which includes standards for classification of hazardous materials, labeling, and placarding of containers, and vehicles, vehicle equipment standards, training of transport personnel, and incident reporting.

5.7.4 Mitigation Measures

The following mitigation measures are included in the project to reduce its impacts on hazards and hazardous material to below a level of significance for each of the alignments:

HAZ-1 A surface sweep is a method for measuring combustible vapors which may be emitted from the ground surface. The technique utilizes a sensitive portable gas detector, called a flame ionization detector (FID) to detect methane. The FID is capable of measuring methane concentrations as low as several ppm. When conducting the surface sweep, more attention can be taken in areas where underground gas would tend to exit the surface, such as at cracks in the ground.

Surface sweep measurements are intended to identify any flow of gas from the surface of the ground. Finding such “advective” flow is a good indicator of potential pressurized flow of undiluted gas in the soil.

HAZ-2 The City of Los Angeles Building Code requires that methane mitigation be implemented when construction occurs at these sites to ensure public safety. These measures include the installation of membrane barriers and vent piping, as well as trench dams and electrical seal-offs for each of these properties. Since these measures would already be required by City regulation, no additional mitigation measures are required.

Continued compliance with the many federal, state, and local requirements pertaining to the handling of hazardous materials/wastes would maintain acceptable levels of health and safety. These regulatory requirements are specifically designed to avoid any unauthorized and uncontrolled releases of hazardous materials to the environments and protect workers who may be exposed to hazardous materials/wastes, as well as provide a level of safety for the general public.

Strict compliance with local, state, and federal regulatory requirements provides the primary method of mitigating against hazardous waste impacts.

Handling of contaminated materials encountered during construction of any of the alignments should be coordinated centrally in order to ensure compliance with all applicable regulations. Construction bid documents should incorporate provisions for identification, segregation, handling and disposal of contaminated materials. In addition, bid documents should require all construction contractors to prepare site-specific Health and Safety Plans.

5.7.5 Unavoidable Adverse Impacts

Provided that all federal, state, and local regulations pertaining to project activities are followed and project-specific Health and Safety and Emergency Response Plans are developed and implemented, significant or long-term adverse impacts will be avoided.

5.7.6 Cumulative and Secondary Impacts

The three main aspects of hazardous materials addressed in this analysis are (1) the use, storage, transport, and disposal of hazardous materials and waste; (2) hazardous materials contamination and remediation; and (3) hazardous building materials.

Development of any of the proposed alignments would result in increased use of hazardous substances such as fuels, cutting fluids, other lubricants, solvents, and waste oils. The increase in the presence of these substances could increase the chances of a spill or release of hazardous substances during handling or storage. The use of hazardous materials and the generation of hazardous wastes from the construction activities would also increase the transportation of hazardous materials and hazardous wastes on public roadways. The likelihood of an accident involving hazardous materials or wastes would therefore increase, resulting in a greater potential for people and the environment to be exposed to these substances.

These alternatives would also increase demand for hazardous waste disposal capacity. During the extensive construction activities associated with each of the alignment alternatives, it is possible that contaminated soils would be unearthed, potentially exposing construction workers or the public to hazardous materials. However, this material will be collected, put in containers and disposed of at a Class 1 Landfill.

Proper packaging and handling of hazardous materials and wastes, coupled with employee training and emergency response, would reduce potential cumulative impacts of increased ground transport of hazardous materials/wastes to a level that is less than significant. With respect to the cumulative demand for treatment, recycling, and disposal, because sufficient capacity is expected to be available, the impact of cumulative increases is hazardous.