

## C.5 ENVIRONMENTAL CONTAMINATION

This section addresses the environmental setting and impacts related to the construction and operation of the Proposed Project and alternatives. Specifically, Section C.5.1 provides a description of the environmental baseline and regulatory settings, followed by an environmental impacts analysis of the Proposed Action in Section C.5.2. Impact analysis for the alternatives is provided in subsequent sections.

### C.5.1 ENVIRONMENTAL BASELINE AND REGULATORY SETTING

#### C.5.1.1 Environmental Setting

The proposed Carson to Norwalk Pipeline Project and alternative pipeline routes traverse land utilized for a variety of uses including: residential housing, commercial uses, oil production and storage, industrial activities, and minor agriculture uses. Existing and past land use activities are used as potential indicators of hazardous material storage and use. For example, many industrial sites, historic and current, are known or suspected to have soil or groundwater contamination by hazardous substances. Properties devoted to oil production, including oil fields and processing facilities, are commonly known or suspected to have environmental contamination from petroleum hydrocarbons, heavy metals and chlorinated solvents. Other hazardous materials sources include leaking underground tanks in commercial and industrial areas, surface runoff from contaminated sites and migration of contaminated groundwater plumes to the pipeline route, and application of pesticides and herbicides on agricultural land.

Sites with known or suspected contamination were identified along or near the proposed pipeline routes to better define the areas where hazardous waste may impact construction activities. The primary issue is worker health and safety and public exposure to hazardous materials during construction and waste handling. Potential impacts on air quality and traffic during waste transport must also be considered. Where encountered, contaminated soil may qualify as hazardous waste and thus require handling and disposal according to local, state and federal regulations.

##### C.5.1.1.1 *Land Use*

Land use activities associated with hazardous substances along the alignment include industrial, oil production, and commercial (such as dry cleaners, automotive repair and gas stations). Land uses of concern were identified along the proposed route by review of regulatory agency databases and visual reconnaissance along the route. A summary of the land use categories along the proposed and alternative routes is presented in Table C.5-1; a more detailed description of land uses is included in Section C.8, Land Use. Following is a general discussion of the land use concerns along the proposed route and alternate segments of the proposed project. The proposed route and alternate segments will be located in existing roads or utility ROWs.

**Table C.5-1 Land Uses of Concern Summary Table**

Milepost <sup>(1)</sup>		Location	Miles of Land Use Type		
Start	End		Commercial	Oil Prod.	Industrial
<b>Carson to Norwalk Pipeline - Main Proposed Route</b>					
0	3.4	Watson to Los Angeles River <sup>(2)</sup>	0.3	0.1	2.6
3.4	5.1	DeForest Avenue, South Street	0.2		
5.1	6.6	South Street, Paramount Boulevard		0.8	0.7
6.6	10.1	Artesia Boulevard	3.1		0.1
10.1	13.0	Studebaker Road, 166th Street, Norwalk Boulevard <sup>(3)</sup>	0.2	0.1	0.1
<b>Santa Fe Alternative</b>					
0	0.9	Santa Fe Avenue			0.9
<b>Cherry Alternative</b>					
0	1.0	Cherry Avenue	0.6	0.3	
1.0	1.5	Artesia Boulevard			0.5
<b>Paramount Alternative</b>					
0	1.0	Garfield Avenue	0.2		0.8
1.0	3.5	Alondra Boulevard	2.5		
<b>Alondra Alternative</b>					
0	1.0	Lakewood Boulevard	0.5		
1.0	5.0	Alondra Boulevard	3.8		0.9
<b>Bellflower Rail Alternative</b>					
0	1.8	Lakewood Boulevard	1.7		
1.8	4.2	Railroad ROW	2.1		
<b>Shoemaker Alternative</b>					
0	1.5	Alondra Boulevard, Shoemaker Avenue	0.2		1.0

Notes:

- (1) Mileposts are approximate.
- (2) 0.1 miles of agricultural use.
- (3) 0.2 miles of agricultural use.

The proposed route passes through a mixture of industrial, commercial, and residential areas. Industrial uses include warehousing, manufacturing, chemical processing, asphalt manufacturing, and oil production service companies. Approximately one mile of the proposed route traverses adjacent to or in close proximity to oil processing, storage and pumping facilities, primarily located on the west side of Paramount Boulevard. In addition, the proposed route will pass through the southeastern edge of the Dominguez oil field and north of the Long Beach oil field. Both of these oil fields are currently in operation. Commercial uses such as dry cleaners, gas stations, and automotive repair are common along Artesia Boulevard and South Street. The proposed route passes through approximately 4.5 miles of predominantly residential neighborhoods.

The Santa Fe Alternative segment is located entirely in the area of Rancho Dominguez. Land use activities are principally associated with light industrial and shipping facilities. The Santa Fe Alternative passes through the southeastern edge of the Dominguez oil field, and north of the Long Beach oil field.

Properties along the Cherry Alternative segment are a mix of residential, commercial, and oil industry. This segment passes adjacent to large oil storage and pumping facilities on the east side of Cherry Avenue and the south side of Artesia Boulevard. Commercial facilities of concern along this segment consist of several gas stations and automotive repair shops.

The Paramount Alternative includes industrial, commercial, and residential land uses. Garfield Avenue and western Alondra Boulevard are primarily industrial, and Alondra, east of Downey, is commercial.

The Alondra Alternative segment passes primarily through commercial and residential properties, with a few light industrial properties interspersed. Numerous automotive repair shops and gas stations are distributed along Alondra Boulevard. Several schools are located along this alignment, including Cerritos College.

The Bellflower Rail Alternative segment includes primarily commercial land uses along Lakewood Boulevard, with mixed commercial, industrial, and residential land uses along the railroad ROW.

The Artesia Alternative segment passes through a mixture of residential, commercial, and light industrial. Commercial facilities of concern along this segment consist of gas stations and automotive repair shops.

Land use along the eastern portion of the Shoemaker Alternative segment is predominantly light industrial, including shipping and warehouse facilities. The west part of the Shoemaker Alternative, along Alondra Boulevard between Norwalk Boulevard and Bloomfield Avenue is residential.

#### ***C.5.1.1.2 Existing Contamination Sites Along Pipeline ROW***

A preliminary environmental assessment was prepared for the PEA to identify potential sites that would impact construction due to the presence of toxic or hazardous substances, principally contaminated soil and groundwater. The preliminary assessment consisted of a database search, review of agency records, data review and screening, field check of potentially contaminated sites and synthesis of the data.

Searches of Federal, State and local regulatory agency listings of sites with known or suspected hazardous material contamination were performed by Environmental Data Resources (EDR), dated January 23, 1997, November 28, 1997, and January 7, 1998. Data were compiled for potentially contaminated sites within a one quarter-mile wide corridor along the proposed route and alternative segments (one eighth-mile either side of the alignment). The searches included databases from 10 Federal agencies, 14 California State agencies, and two local Los Angeles County programs. Table C.5-2 lists these databases, the date of the most recent database update, and the general ranking assigned by the potential for each type of site to impact the project.

**Table C.5-2 Databases Searched and Potential Impact Ranking**

<b>Database Name</b>	<b>Most Recent Update</b>	<b>Ranking</b>
Aboveground Petroleum Storage Tank Facilities (AST)	11/22/96	Low
CAL-SITES, formerly ASPIS, Known and Potential Hazardous Waste Sites (Cal Sites)	4/12/96	High
California DTSC's Annual Workplan (CA AWP)	6/30/95	High
California Hazardous Material Incident Report System (CHMIRS)	12/31/94	Low
California Regional Water Quality Control Board: Spill, Leak, Investigation and Cleanup Sites (CA SLIC)	10/01/96	High
California Waste Discharge System (CA-WDS)	8/01/96	Low
CERCLIS sites designated "No Further Remedial Action Planned" (CERC-NFRAP)	3/31/96	Low
Cortese, Identified Hazardous Waste and Substance Sites (Cortese)	12/31/94	High
Emergency Response Notification System (ERNS)	6/30/96	Medium
Facility Index System (FINDS)	9/30/95	Low
Facility Inventory Database (CA FID)	10/31/94	Low
Hazardous Materials Information Reporting System (HMIRS)	12/31/95	Low
Hazardous Substance Storage Container Database (UST)	10/15/90	Low
Hazardous Waste Information System, HAZNET, (HWIS)	12/31/95	Low
Leaking Underground Storage Tank Information System (LUST)	9/30/96	High
Los Angeles County: Site Mitigation Log (SML)	8/21/96	High
Los Angeles County: Industrial Waste and Underground Storage Tank Sites (HMS)	9/30/96	Low
PCB Activity Database System (Pads)	8/26/96	Low
Proposition 65 Notification Records (Notify 65)	10/21/93	Low
Resource Conservation and Recovery Information System, Large Quantity Generator (RCRIS-LQG)	7/01/96	Low
Resource Conservation and Recovery Information System, Small Quantity Generator (RCRIS-SQG)	7/01/96	Low
Resource Conservation and Recovery Information System; Transportation, Storage and/or Disposal Facility (RCRIS-TSD)	7/01/96	Low
Solid Waste Information System, SWIS, (SWF/LF)	11/15/96	High
Toxic Chemical Release Inventory System (TRIS)	12/31/92	Medium
Toxic Substances Control Act (TSCA)	1/31/95	Low
Waste Management Unit Database (SWAT)	9/06/96	High

Note: Individual site listings were ranked as medium if database information regarding contaminant type indicated hydrocarbon contamination. Additionally, listing was downgraded to low if database information indicated that the site is closed or that no further action is required/deemed necessary.

Compilation of the database identified approximately 650 sites. The following screening criteria were developed by the PEA and used to rank the potential of individual sites to environmentally impact the project:

- Data were screened out by distance from the pipeline alignment, the remaining sites were ranked based on the databases where they were listed.
- The databases searched that typically indicate that a confirmed release occurred at the site were ranked as high.
- Databases that reflect administrative records or permits related only to the use or presence of some hazardous material at the site were ranked as low.
- Following this initial ranking, data for those sites that ranked with a possible high potential to impact the construction area were individually reviewed to assess the contaminant type.

- Sites with unknown contaminants, contamination by substances other than hydrocarbons (i.e., volatile organic compounds [VOCs], methyl ethyl ketone [MEK], or metals) and one landfill remained as high potential impact ranked sites.
- The rankings of those sites identified as being contaminated with hydrocarbons were then downgraded to medium potential impact rather than high. Sites with hydrocarbon contamination were ranked lower than sites with unknown or other contaminants because SFPP has already developed standard operating procedures for working at sites with hydrocarbon contamination.
- Sites that have been closed, or for which no further action has been required/deemed necessary, were ranked as low potential impact sites.

Using the above screening criteria developed for the PEA, agency listed active hazardous waste sites within the study corridor for the proposed project route with high and medium ranking are presented in Table C.5-3. Regulatory agency listed sites requiring no further action and sites ranked as low potential to impact the project are not presented in the table. Table C.5-3 lists 33 sites with high or medium potential to impact the Proposed Route, three sites for the Santa Fe Alternative, seven sites for the Cherry Alternative, eight sites for the Paramount Alternative, 18 sites for the Alondra Alternative, one for the Bellflower Rail Alternative, five for the Artesia Alternative, and three for the Shoemaker Alternative.

**Table C.5-3 Hazardous Waste Sites with High and Medium Potential to Impact the Project**

Site Name	List <sup>1</sup>	Potential to Impact Project	Hydrocarbon Contamination
<b>CARSON TO NORWALK PIPELINE - MAIN PROPOSED ROUTE</b>			
Continental Polymers Inc./ICI Acrylics Inc.	Cortese, LUST, FINDS, TRIS, CA FID, HWIS	High	No
Coastcast Corp	FINDS, RCRIS-LQG, TRIS, HMS	Medium	No
Indust. Tectonics/Axel Johnson	SML, HMS, Cal Sites, CA SLIC	High	No
Robert Shaw Control	CA SLIC, Cortese, LUST	High	No
Chevron #9-3874	LUST, Cortese	Medium	Yes
D & H Mobil Service Center/Tabbaa's Property'	LUST, Cortese	Medium	Yes
Kevin Ray Demolition	LUST, HWIS	Medium	Yes
Shell Oil Gas Station	SML	Medium	No
Unocal #1112	LUST, HWIS, Cortese	Medium	Yes
Charter Hospital	Cortese, LUST	Medium	Yes
Long Beach City Landfill	SWAT, SWF/LF	Medium	No
5900 Paramount Blvd Cross St is South St	ERNS	Medium	No
Arco Hynes Refinery	Cal Sites, Cortese, SML	Medium	No
East Hynes Tank Farm/Four Corners Pipeline Co	Cortese, LUST	Medium	Yes
Thrifty #072	LUST	Medium	Yes
Transit Mixed Concrete Company	LUST	Medium	Yes
South Coast Shingle Company	LUST, Cortese	Medium	Yes
Hudson Oil Station (Former)	LUST	Medium	Yes
Schweitzer Property	LUST, HWIS	Medium	Yes
Circle K #5222	LUST	Medium	Yes

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Site Name	List <sup>1</sup>	Potential to Impact Project	Hydrocarbon Contamination
Garin Oil Company # 9	UST, LUST	Medium	Yes
Monsanto Chemical Co.	CA SLIC	High	No
Toyota Motor Service/Hyundai Steel Ind	CA SLIC, LUST, Cortese, FINDS	High	No
Monsanto Chemical Company	SML, Cal Sites, HWIS	High	No
Toyota Auto Body Corp./Toyota Motors Mfg USA Inc	CA SLIC, HWIS, LUST, FINDS, RCRIS-LQG, TRIS, UST	High	No
Alameda Management Co. #544	LUST, HMS, Cortese	Medium	Yes
Shell #204-0588-0400	LUST, HMS, Cortese	Medium	Yes
Old Five Inc.	LUST, Cortese	Medium	Yes
Admiral Pest Control	LUST	Medium	Yes
Arco Fac. #5220	LUST, Cortese	Medium	Yes
Shell	LUST, Cortese	Medium	Yes
Diamond Tire Center	LUST, Cortese	Medium	Yes
Texaco #	Cortese, LUST	Medium	Yes
Defense Fuel Supply Center, Norwalk	FINDS, RCRIS-LQG, CERC-NFRAP, UST, CA FID	High	Yes
<b>SANTA FE ALTERNATIVE SEGMENT</b>			
Ameritone Paint Corp.	FINDS, RCRIS-LQG, TRIS, UST, HMS	Medium	No
Chevron	Cortese	Medium	Yes
JB I Inc.	TRIS	Medium	No
<b>CHERRY ALTERNATIVE SEGMENT</b>			
Clem DT&R Inc.	Cortese, FINDS	High	No
Pete's Drive-in Dairy	LUST, CA FID, UST	Medium	Yes
Garin Oil Company #9	LUST, CA FID, UST	Medium	Yes
Exxon Co. USA - SS #72515	ERNS, UST, CA FID	Medium	No
Monsato Chemical Co.	CA SLIC	High	No
Pete's Service/Mobil	Cortese, LUST, UST, CA FID	Medium	Yes
API Alarm Systems Inc.	LUST, UST, FINDS, CA FID, RCRIS-SQG	Medium	Yes
Four Corners Pipe Line Co./West Hynes	Cortese, LUST, UST, CA FID, FINDS, CA SLIC, HAZNET, CA WDS, AST, ERNS, RCRIS-LQG	Medium	Yes
<b>PARAMOUNT ALTERNATIVE SEGMENT</b>			
Weber Metals Inc.	TRIS, HAZNET, FINDS, HMS	Medium	No
Rockview Dairy	LUST, Cortese, HMS	Medium	Yes
Shell Station #204-5838-0605	LUST, Cortese, RCRIS-LQG, RCRIS-SQG, FINDS, UST, HMS	Medium	Yes
Fast Gas #24	LUST, Cortese	Medium	Yes
Shadowood Development Corp.	LUST, Cortese, HMS	Medium	Yes
E.S. Development Inc./Western Hyway Distributor	Cortese, UST, HMS	Medium	Yes
Bear Eqpt. Rental/Range Eqpt. Rental Inc.	LUST, Cortese, RCRIS-SQG, FINDS, UST, HMS	Medium	Yes
Paramount Texaco Service Stn/ J. Schreider	LUST, Cortese, UST, HMS	Medium	Yes

Site Name	List <sup>1</sup>	Potential to Impact Project	Hydrocarbon Contamination
<b>ALONDRA ALTERNATIVE SEGMENT</b>			
Anastas Shell #204-588-0905	Cortese, LUST, HMS	Medium	Yes
J & J Truck Sales/Mobil Oil Corp	Cortese, LUST, HMS	Medium	Yes
Bellflower Site	SML	High	No
O.J. Battery	SML	High	No
Exxon #7-3551	LUST, Cortese	Medium	Yes
Texaco #61-106-1406	LUST, Cortese	Medium	Yes
Shell #	Cortese, LUST	Medium	Yes
Fast Gas #24	LUST, Cortese	Medium	Yes
Fast Gas #25	LUST	Medium	Yes
Mobil #11-Mho	Cortese	Medium	Yes
Thrifty #11	LUST, Cortese	Medium	Yes
Texaco Svc Sta	RCRIS-LQG, UST, CA FID, LUST	Medium	Yes
Fire Station #115	LUST	Medium	Yes
Chevron #	Cortese	Medium	Yes
Exxon #7-2519 (Former)	LUST	Medium	Yes
	ERNS	Medium	No
Thrifty #057	LUST, Cortese	Medium	Yes
P & M Service Station #918	LUST	Medium	Yes
<b>BELLFLOWER RAIL ALTERNATIVE SEGMENT</b>			
Caltrans-Flora Vista	Cortese, LUST, RCRIS-LQG, FINDS, UST, HMS	Medium	Yes
<b>ARTESIA ALTERNATIVE SEGMENT</b>			
ARCO Products Co. #1673	Cortese, LUST, UST, HAZNET, HMS, FINDS, RCRIS-LQG	Medium	Yes
Chevron USA SS #9-0355	Cortese, LUST, UST, RCRIS-SQG, FINDS, HMS	Medium	Yes
Ideal Florist	LUST, HAZNET, HMS	Medium	Yes
Elroy Painting Contractor/JF Fetter Painting	SML, CA SLIC, FINDS	High	No
Texaco R & M Inc.	Cortese	High	No
<b>SHOEMAKER ALTERNATIVE SEGMENT</b>			
Shoemaker Ave at Alondra Boulevard	ERNS	Medium	No
Para Plate & Plastics Co.	CA SLIC	High	No
Thrifty Oil Station #057	Cortese, LUST, UST, HAZNET, HMS	Medium	Yes

Sources: EDR Database Site I.D.(January 1997, November 1997, and January 1998)

<sup>1</sup> Regulatory Agency Listing: see Table C.5-2 for description of database

### Contamination at DFSP Norwalk Station

The Defense Fuel Support Point Norwalk (DFSP Norwalk) was constructed in 1923 by a private oil company. DFSP Norwalk was purchased by the U.S. Air Force in 1951 to store and transfer fuels to military installations in southern California. The Defense Logistics Agency assumed operational control of DFSP Norwalk in 1968. Diesel and jet fuel (JP-4 and JP-5) spills and leaks from tanks and pipeline valves were recorded from 1968

to 1975; unauthorized releases prior to 1968 are not reported or documented (Fluor, 1997). A leaky valve on the existing SFPP pipeline was discovered in 1994 at the southeast side of the facility.

The initial site investigation to identify and characterize site conditions relevant to soil and groundwater contamination was completed in February 1982 by the U.S. Army Environmental Hygiene Agency. Numerous soil and groundwater investigations were performed from 1986 to 1992, resulting in disclosure that soil and groundwater contamination exists on the DFSP Norwalk site. As of July 1997 groundwater contaminant plumes extend off site approximately 400 feet to the south and 600 feet to the northwest (see Figure C.5-1). Contamination consists of petroleum hydrocarbons and fuel constituents such as benzene and 1,2-dichloroethane (1,2-DCA), and the fuel additive methyl tertiary butyl ether (MTBE).

Remediation of contaminated soil at DFSP Norwalk uses vapor extraction to remove fuel vapors which are treated on site (W-WC, 1996). Groundwater is present at a depth of 25 to 32 feet below the site. Contaminated groundwater is pumped from wells both on and off the site. Remedial activities began in 1995 and a full-scale system became operational in January 1996 (RAB Site Chronology, 1996). Remedial efforts have recovered about 200,000 gallons of fuel and treated 12 million gallons of contaminated groundwater through June 15, 1997 (W-CC, 1996). Remedial activities consisting of both groundwater and soil vapor extraction occur throughout the site, including the area where the proposed pipeline would be installed. However, characterization of the site has reportedly identified no soil contamination in the upper 5 feet of soil in the area along the proposed pipeline alignment (SFPP, site visit, October 1997). Recent trenching near the proposed route at the southwest corner of DFSP Norwalk did not encounter fuel contaminated soil (SFPP, site visit, October 1997). The proposed route will pass immediately adjacent to the location of the valve that leaked in 1994, causing one of the contamination plumes.

#### **C.5.1.2 Applicable Regulations, Plans and Standards**

Hazardous substances are defined by state and federal regulations to protect public health and the environment. Hazardous materials have certain chemical, physical or infectious properties that cause it to be considered hazardous. The California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261 provides the following definition:

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

Placeholder for Figure C.5-1 Norwalk Station Contamination

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

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline, hexane, and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric (battery) acid or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous wastes are referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses.

Soil that is excavated from a site containing hazardous materials would be a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed; it may also be required if certain other activities are proposed. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

**Hazardous Waste Requirements.** The federal Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

Individual states may implement hazardous waste programs under RCRA with EPA approval. California has not yet received this EPA approval; instead, the California Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency (CALEPA) to regulate hazardous wastes.

While the HWCL is generally more stringent than RCRA, until the EPA approves the California program, both the state and federal laws apply in California.

The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

**Hazardous Material Worker Safety.** The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

## C.5.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The principal environmental impacts involving hazardous waste are the excavation and handling of contaminated soil resulting in exposure of workers and the general public. A wide variety of contaminants including petroleum hydrocarbons, solvents, polynuclear aromatic compounds (PNA's), heavy metals and herbicides may be present along the pipeline route. Contaminant types, concentrations and location cannot be accurately predicted without site specific information. Hazardous materials in the construction area may require special handling as hazardous waste and create an exposure risk to workers and the general public during excavation and transport. Contaminated soil exceeding regulatory limits for trench backfilling will require on-site treatment or transport to off-site processing facilities; contaminated soil removed from the construction area must be transported according to state and federal regulations and be replaced by import soil approved for backfilling. Similar issues pertain to contaminated groundwater, although none is anticipated at proposed excavation depth (seven feet) throughout most of the proposed route and alternative segments.

Sites that are physically separated from the pipeline route would have little or no potential to impact the project. The remaining adjacent sites are ranked as high, medium, or low potential to impact pipeline construction according to site conditions, regulatory status and review of agency records.

### C.5.2.1 Significance Criteria

Impacts of the project on the environment would be considered significant if:

- Pipeline construction causes soil contamination, including flammable or toxic gases, at levels exceeding federal, State and local hazardous waste limits established by 40 CFR Part 261 and Title 22 CCR 66261.21, 66261.22, 66261.23 and 66261.24.

- Construction activities would result in mobilizing contaminants, creating potential pathways of exposure to humans and/or other sensitive receptors.

The presence of contaminated soils and/or groundwater within the proposed and alternative pipeline routes would be considered significant if:

- Workers and/or the public would be exposed to contaminated or hazardous materials during pipeline construction activities and such exposure exceeds permissible exposure levels set by the California Occupational Safety and Health Agency (CAL-OSHA) in CCR Title B and the Federal Occupational Safety and Health Administration (OSHA) in Title 29 CFR Part 1910.

Based on these criteria, the screened database was reviewed to identify sites with potential to contaminate the construction area. Sites are ranked according to high, medium and low potential to significantly impact the project by causing hazardous waste in the pipeline route. Transport of contaminants to the pipeline route from high and medium potential sites would result in a significant, but mitigable (**Class II**) impact. Low potential sites are not likely to contaminate the pipeline route and are considered adverse but not significant (**Class III**) impacts.

Active hazardous waste sites physically separated from the pipeline route by roads or other facilities would have a low potential to cause hazardous substances along the pipeline route. These physical barriers provide a buffer that would restrict surface migration of contaminants from the source and inhibit unauthorized waste disposal along the pipeline route. Subsurface migration of contaminants within the unsaturated soil zone is predominantly vertical downward and is not likely to reach the pipeline route from buffered sites.

Subsurface migration of mobile contaminants within groundwater may provide a conduit to the project area. However, the water table is below the planned excavation depth throughout most of the proposed and alternative routes, and contaminated groundwater below the excavation is not expected to impact construction. Groundwater may be encountered at bored river crossings and other bored locations.

#### **C.5.2.2 Applicant Proposed Measures**

The following measures were proposed by SFPP to reduce impacts related to environmental contamination and are intended to alleviate risks to the exposed population by developing appropriate safeguards and operating procedures prior to construction. It is assumed that these measures will be implemented by SFPP, and the results of the studies will be summarized in safety plans which address appropriate worker protection, and waste management plans that discuss proper handling, storage, transport, treatment and disposal of hazardous waste generated from the project.

The measures outlined below require that field work and technical studies be performed prior to construction. This work may include: regulatory agency records review, development and implementation of sampling plans and soil vapor surveys, and preparation of contingency plans. This work must be performed by qualified environmental professionals.

1. If construction parameters (trench location and/or depth) are changed, SFPP will review and re-evaluate the database records and site rankings. A qualified professional (California registered geologist, registered environmental assessor, or civil engineer experienced in environmental assessments) will perform the review.
2. SFPP will conduct a reconnaissance of the proposed and alternate pipeline alignments to provide additional information and visual confirmation for those sites identified as a high or medium potential impact sites in Table C.5-3. The results of the reconnaissance, combined with the results of this contamination prescreening process, will provide information necessary to better evaluate those areas which may require additional evaluation. Some sites identified as medium risk sites during the contamination prescreening process may be downgraded to low risk sites after the reconnaissance and, therefore, may not require additional evaluation. Additional evaluation would include regulatory agency records review for specific sites. The records review will attempt to identify data indicating no offsite contamination of the pipeline route, adequate site remediation or agency-certified closure of the site. Sites for which this information is obtained, will be downgraded to low potential impact sites.

A general contingency plan will be developed for sites which remain as high or medium potential impact sites following the site reconnaissance and records review. The contingency plan should be prepared prior to commencement of alignment construction, to avoid any unnecessary delays in the event that contamination is encountered. The contingency plan would identify specific measures, precautions and alternatives for action to be taken if/when contaminated soils or vapors are encountered in the pipeline route. The plan will specify procedures for monitoring, identifying, handling and disposing of hazardous materials/waste. The contingency plan will include a health and safety plan, reviewed and signed by a certified industrial hygienist (CIH), specifying site monitoring guidelines and action levels, as well as personal protective equipment.

3. Once the presence of contamination is confirmed, SFPP will develop a specific contingency plan. The specific contingency plan should identify the regulatory agencies to notify, the appropriate environmental permits that may be required, the names of qualified hazardous waste haulers, and the locations of appropriate treatment/disposal facilities. Some additional items to be included in the plan would be:
  - A listing of known contaminants and contaminant levels
  - Agency notification requirements
  - Monitoring requirements
  - Agency participation requirements
  - Public notification requirements
  - Personal protective equipment and Health and Safety requirements.

Areas with contaminated soil determined to be hazardous will be excavated by personnel who have been trained through the OSHA recommended, 40-hour safety program (29 CFR 1910.120) with an approved plan for excavation, control of contaminant releases to the air and offsite transport. Health and safety

plans, reviewed and signed by a CIH, will be developed to protect the general public and workers in the construction zone.

If the agency record review indicates the potential of toxic or explosive gases (i.e. benzene, vinyl chloride, methane) emanating from the Long Beach City Landfill, a qualified environmental professional will conduct a soil vapor survey along the Proposed Project pipeline route immediately adjacent to the landfill. Where potentially hazardous levels of gas are identified, mitigation by aeration and gas monitoring will be performed during construction.

4. SFPP will assign trained personnel during active trenching to observe visual evidence of contamination (staining) and/or odorous conditions. Monitoring with appropriate testing equipment (photo-ionization or flame ionization detectors) will be performed and sampling and laboratory testing will be conducted as necessary to identify areas of previously unknown soil and/or vapor contamination within the excavation. Trained personnel will meet the federal OSHA requirement for 40-hour Training for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120), and be familiar with the calibration and operation of the testing equipment.

The monitoring personnel will have the authority to implement an approved contingency plan when hazardous materials are encountered. Contingency plans, developed prior to construction, would identify specific measures, precautions and alternatives for action to be taken if/when contaminated soils or vapors are encountered in the pipeline route. The plan would specify procedures for monitoring, identifying, handling and disposing of hazardous materials/waste, including contamination from unanticipated sources within the excavated trench.

### **C.5.2.3 Impacts and Mitigation Measures: Proposed Pipeline**

Table C.5-3 in Section C.5.1.1.2 lists eight sites with high, and 25 sites with medium, potential to impact the proposed route. Twenty-one of the medium potential sites are LUST listed sites with hydrocarbon contamination.

The presence of hazardous waste sites along the pipeline route represents a potential significant impact due to the potential health hazards to construction workers and the public. The following mitigation measures would provide an assessment of actual or potential site contamination, resulting in the development of appropriate safeguards and methods to reduce potential risk prior to construction. The mitigation measures outlined below must be accomplished prior to construction to allow development of appropriate worker protection and waste management plans that discuss proper handling, treatment and storage of hazardous waste from the project (prior to construction).

Three mitigation measures (EC-1, EC-2, EC-3) are proposed, corresponding to the three ranks (low, medium, high) of potential to impact the project (as listed in Table C.5-3). These measures present procedures for evaluating sites with low, moderate, and high impact potential. While the existence of hazardous sites along

the project corridor or at stations is a potentially significant impact, the application of the following mitigation measures reduces that impact to a level that is not significant (**Class II**) because excavation, handling and treating of contaminated soil will be accomplished under pre-approved plans designed to protect the workers, public and the environment. Any clean-up of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (**Class IV**) impact. Clean up of contaminated sites along the pipeline route would also cause a minor adverse impact (**Class III**) by adding to the regional hazardous material transportation, treatment and disposal systems.

**Impact:** Construction through areas with identified contaminated sites could affect workers or nearby public (**Class II**).

**EC-1** SFPP shall re-evaluate low potential sites if construction parameters vary in the following ways: trench depth exceeds planned depth of seven feet and will potentially encounter contaminated groundwater or the location of the trench is re-located out of the public right-of-way (where trenching could occur in a "low" potential site). If these conditions are met, SFPP shall reevaluate all "low" potential sites to determine whether they need to be reclassified as medium or high impact potential sites. A qualified and approved environmental consultant (California registered geologist or civil engineer experienced in environmental assessments acceptable to CPUC) shall perform the review and evaluation, and the results shall be reviewed and approved by the appropriate Los Angeles County Environmental Protection Division or DTSC prior to construction. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

**EC-2** Thoroughly review current agency records followed by site-specific visual inspection of the pipeline route by a qualified and approved environmental consultant for "medium" potential sites (as labeled in Table C.5-3). Record review shall identify data confirming no off-site contamination extending to the pipeline route, adequate remediation of the pipeline route or agency certified closure of the site. Visual inspection should be completed for the unpaved portions of the route; in these locations, investigations of the shallow subsurface (with the aid of a spade or probe) should verify no evidence of off-site discharge, surface stains or unauthorized dumping. If results of the record review or visual inspection that indicate contamination is present in the pipeline route shall cause medium potential sites to be treated as high potential.

Medium potential sites include numerous facilities with leaking underground fuel tanks and pipelines at service stations and auto repair shops. Record review of these potential sites must determine that the horizontal limits of soil contamination do not extend near the proposed trench area. Where the limits of contamination are uncertain, a soil vapor survey or soil sampling should be conducted along the affected length of the proposed trench. Laboratory test results from these site investigations should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles

County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

The proposed route passes near the Long Beach City Landfill at Paramount Boulevard and South Street. To assess the possibility that contamination from this site could affect the pipeline construction zone, a record search shall be completed to determine whether contamination could extend into the proposed trench. If records cannot confirm a gas-free landfill perimeter adjacent to the project, a soil vapor survey consisting of driving probes every 25 to 50 feet along the affected trench line should be conducted. Vapor samples should be tested for methane, other flammable gases and volatile organic compounds. Laboratory test results should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.

**EC-3** Review current agency records of "high" potential sites (as labeled in Table C.5-3) to design an investigation program to assess surface waste or debris and underlying soil. The review shall be performed by a qualified and approved environmental consultant. Results shall be reviewed and approved by the Los Angeles County Environmental Protection Division or DTSC prior to construction. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction. If records review demonstrates that contamination from "high" sites does not extend off-site, or if remediation has been completed, and/or the agency has issued a case closed status, the site may be downgraded to a "low" potential site.

If the records review does not eliminate the possibility that contamination could extend off-site, an investigation shall be performed. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation for high potential sites shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site.

Areas with contaminated soil determined to be hazardous waste shall be excavated by personnel who have been trained through the OSHA recommended 40-hour safety program (29CFR1910.120) with an approved plan for excavation, control of contaminant releases to the air and off-site transport or on-site treatment. Health and safety plans, prepared by a qualified and approved industrial hygienist, shall be developed to protect the general public and all workers in the construction area.

### **Mitigation Measures for Station Modifications**

**Impact:** Construction through contaminated soils at stations could affect workers and/or nearby members of the public (**Class II**).

- EC-4** The Norwalk Station, or DFSP Norwalk, is ranked as having high potential to impact the project due to contamination of soil and groundwater by jet fuels (JP-4 and JP-5), gasoline, diesel, and buried hydrocarbon wastes. A subsurface investigation combining soil vapor and soil sampling should be undertaken along the proposed pipeline route and in any other areas where ground disturbance would result from modifications at this station. Sampling probes should be driving at intervals of 25 feet (horizontal spacing) to collect soil and vapor samples throughout the trench depth. Samples should be tested for all ranges of petroleum hydrocarbons, MTBE, 1,2-DCA and other volatile organic compounds. Vapor testing at mid-trench and full-trench depth is required to adequately determine the presence of vapor within the trench to assess potential exposure to workers and the public. Laboratory test results should be reported to DTSC or the Los Angeles County Environmental Protection Division and include an assessment of the contamination potential in the trench area. A copy of the DTSC or Los Angeles County Environmental Protection Division approval letter must be provided to the CPUC prior to start of construction.
- EC-5** SFPP shall perform contaminated site records searches for the Watson Station (City of Carson), Industry Station, and Colton Terminal, and provide search results to the DTSC and the CPUC. If no contamination is recorded at any of the three stations, then only Mitigation Measure EC-6 shall apply to construction within or adjacent to stations. If any station includes recorded contamination, the site shall be ranked as having high, medium, or low potential for impact, and Mitigation Measures EC-1 through EC-3 shall apply, as appropriate. A letter or report shall be submitted to the DTSC and CPUC prior to the start of construction, documenting compliance with this measure.

#### **Mitigation Measure for Discovery of Unknown Contaminants**

Mitigation Measure EC-5 addresses unknown contaminants concerns.

**Impact:** Construction workers or nearby members of the public could be affected by encountering unanticipated contaminated soils (**Class II**).

- EC-6** Assign trained personnel during active trenching to observe visual evidence of contamination and perform monitoring with appropriate testing equipment (photoionization or flame ionization detectors), sampling and direct laboratory testing as necessary to identify areas of previously unknown soil contamination within the excavation. These personnel should meet the federal OSHA requirement for 40-Hour Training for Hazardous Waste Operations and Emergency Response (29CFR1910.120) and be familiar with the calibration and operation of the testing equipment.

The monitoring personnel shall have authority to implement an approved contingency plan when hazardous materials are encountered. Contingency plans, developed and approved by the County Health Department or California DTSC prior to construction, shall present specific alternatives for action to be taken in the event contaminated soils are encountered. The plan shall specify procedures for monitoring, identifying, handling and disposing of hazardous waste, including contamination from

unanticipated tanks or pipelines within the excavation. The contingency plan shall include a health and safety plan prepared by a Certified Industrial Hygienist specifying site monitoring and personal protective equipment.

#### **Mitigation Measure for Oil Fields; Abandoned Oil Wells**

**Impact:** Pipeline construction could interfere with abandoned or inactive oil wells (**Class II**).

**EC-7** Prior to trench excavation and pipeline construction, the Applicant shall contact the California Department of Conservation, Division of Oil, Gas and Geothermal Resources for specific information on wells located in or near the pipeline route, including location and abandonment details. The Applicant shall make a diligent effort to avoid construction over abandoned oil wells. If the pipeline is located over or near (i.e. within 50 feet of the pipeline route) a plugged or abandoned well, or if an unrecorded well is encountered during construction, the Applicant shall coordinate with the Division of Oil, Gas and Geothermal Resources to ensure that the well is flagged for avoidance, correctly abandoned, and does not require remedial plugging or the installation of a gas venting system.

#### **C.5.2.4 Impacts of Project Operation**

The Proposed Project will not contribute to existing levels of environmental contamination, unless there is a pipeline leak or rupture (see Section C.11.3). An additional adverse (**Class III**) impact could result if future remediation efforts in the vicinity of the pipeline were limited by the presence of an operational pipeline.

#### **C.5.2.5 Cumulative Impacts and Mitigation Measures**

Clean up and disposal of contaminated soil is a beneficial impact (**Class IV**) resulting from construction of the Proposed Project and other projects. Clean up becomes an adverse impact only when the volume of contaminated soil requiring treatment exceeds the capacity of the available treatment facilities. As a result, if treatment facilities are operating at or near capacity, the potential presence of contaminated soil along the project ROW would represent an adverse, but mitigable, **Class II**, cumulative impact.

It is difficult to identify the capacity of existing treatment facilities that would be impacted by the Proposed Project and determine of the volume of contaminated material from sites in the project area that would impact these facilities during construction of the proposed pipeline. Construction of the Proposed Project would likely coincide with construction of only a few of the projects listed on the cumulative projects table (see Table B.10-1). Additional approved and pending projects that are not listed on the cumulative scenario tables because they are not near the proposed alignment could also impact the capacity of hazardous waste treatment facilities while construction of the proposed pipeline is ongoing. However, the identification of the projects on the cumulative scenario tables that are located near sites with known or suspected soil contamination provides a first order approximation of the cumulative impacts.

As illustrated on Table C.5-3, there are 80 sites with known soil or ground water contamination near the proposed route that have been rated as having either a medium or high potential to impact the Proposed Project or alternative route segments. Many of these sites are undergoing continued investigation or remediation. Offsite transport and treatment of contaminated soils from both the proposed project and the approved and pending projects listed in Table B.10-1 could result in significant, but mitigable (**Class II**) cumulative impacts if treatment facilities are operating at or near capacity. Mitigation Measure EC-8 is suggested to reduce these potential impacts.

**Impact:** Disposal of large amounts of contaminated soil from project construction could stress capacity of qualified treatment facilities (**Class II**).

**EC-8** If qualified treatment facilities are impacted, the project proponent shall utilize portable on-site treatment units or in-situ treatment prior to construction in order to greatly reduce transport- and treatment-related cumulative impacts. Applicable technologies such as chemical stabilization and fixation, thermal combustion, vapor extraction or bioremediation can be selected based on site specific conditions.

#### **C.5.2.6 Unavoidable Significant Impacts**

There are no known unavoidable significant environmental contamination impacts associated with the construction of the proposed Watson to Norwalk pipeline. Unavoidable significant impacts resulting from an oil spill during operation of the proposed pipeline are addressed in Section C.11.5.

#### **C.5.3 SANTA FE ALTERNATIVE SEGMENT**

The Santa Fe Alternative segment is a 0.6-mile alternative that would replace the Laurel Park segment of the Proposed Route. Both of these segments have a small number of low potential sites (6 vs. 18, alternative vs. proposed) that could require implementation of Mitigation Measure EC-1 (see Section C.5.2.3 for description of mitigation measures). Low potential sites are listed in the PEA. The Laurel Park segment has no listed high or medium potential sites, whereas the Santa Fe Alternative has three medium potential sites which would require evaluation using Mitigation Measure EC-2. One of the medium potential sites on the Santa Fe Alternative segment has known or suspected hydrocarbon contamination. The proximity of the Dominguez and Long Beach oil fields would require implementation of EC-6 for either the Laurel Park segment or the Santa Fe Alternative. The potential impacts along this alternative segment are potentially significant, but mitigable (**Class II**).

#### **C.5.4 CHERRY ALTERNATIVE SEGMENT**

This alternative segment is approximately 1.5 miles long and would replace the Paramount segment of the Proposed Route (South Street from Cherry Avenue to Paramount, and Paramount Boulevard to Artesia Boulevard). Low potential sites that may require implementation of EC-1 are located along both segments.

Both segments will require implementation of mitigation measures EC-2 and EC-3. Two high potential and six medium potential sites (five with known or suspected hydrocarbon contamination) are located along the Cherry Alternative segment. The Paramount segment has a greater number of listings with 6 high and 12 medium potential sites, with one of the medium sites being a landfill site. However, two of these sites (one each high and low potential) are also listed on the Cherry listing. The Arco Hynes Refinery/Tank Farm although listed on Paramount Boulevard, spans the entire block between Paramount Boulevard and Cherry Avenue and is also adjacent to the Cherry Alternative segment. Both alignment segments would fall under impact category **Class II**.

#### **C.5.5 PARAMOUNT ALTERNATIVE SEGMENT**

This alternative segment is approximately 2.5 miles long (1 mile on Garfield and 1.5 miles on Alondra) and would replace the segment of the proposed route along Artesia Boulevard between Paramount and Lakewood. Low potential sites that may require implementation of EC-1 are located along both streets. Implementation of Mitigation Measures EC-2 and EC-3 will be required: eight medium potential sites (seven with known or suspected hydrocarbon contamination) are located along the Paramount Alternative Segment. The Paramount segment has a greater number of listings with 8 medium potential sites (proposed route has five medium potential sites); neither segment has any high potential sites. The proposed route segment is preferred over this alternative segment. This alternative would have significant but mitigable (**Class II**) impacts.

#### **C.5.6 ALONDRA ALTERNATIVE SEGMENT**

The Alondra Alternative segment is approximately four miles long and would replace a segment of the Proposed Route on Artesia Boulevard, from Lakewood Boulevard to Studebaker Road. A relatively high, but approximately equal number of low potential sites for each segment (82 vs. 87) are listed in the PEA, and could require evaluation using Mitigation Measure EC-1. Table C.5.3 lists two high and 16 medium potential sites along the Alondra Alternative segment (**Class II**). Mitigation Measure EC-3 should be implemented for the two high potential sites where type and status of the contamination are not specified. Fifteen of the 16 medium potential sites are listed as having known or suspected hydrocarbon contamination. Mitigation Measure EC-2 should be used to evaluate these sites. In contrast, the corresponding proposed route segment of Artesia Boulevard has no listed high potential sites and only four medium potential sites (all with known or suspected hydrocarbon contamination) which should be evaluated by implementation of EC-2 (**Class II**).

The Alondra Alternative would also replace the 166th Street segment (Studebaker from Artesia to 166th Street and 166th Street to Norwalk Boulevard) of the proposed route. There are approximately 27 low potential sites for each alignment segment that may require implementation of EC-1. No high or medium potential sites are listed for the Alondra East Alternative segment, whereas two medium potential sites with known or suspected hydrocarbon contamination are present along the 166th Street segment of the proposed route and would require implementation of EC-2. Either alignment segment would result in potentially significant but mitigable environmental impacts (**Class II**).

### **C.5.7 BELLFLOWER RAIL ALTERNATIVE SEGMENT**

This alternative segment is approximately 4.2 miles long and would replace the portion of the proposed route along Artesia Boulevard from Lakewood to the 605 Freeway. Low potential sites along the ROW may require implementation of Mitigation Measure EC-1. The Bellflower Rail Alternative will require implementation of Mitigation Measures EC-2 and EC-3. One medium potential sites (with known or suspected hydrocarbon contamination) is located along the alternative segment. The Bellflower Rail Alternative Segment has fewer listings than the corresponding proposed route segment, which has six medium potential sites. This alternative is preferred over the proposed route, and would have significant but mitigable (**Class II**) impacts.

### **C.5.8 ARTESIA ALTERNATIVE SEGMENT**

The Artesia Alternative segment would replace the 166th Street segment of the Proposed Route. Three medium sites, all with known or suspected hydrocarbon contamination, and two high potential sites are located along this alternative segment alignment and would require implementation of Mitigation Measures EC-1, EC-2, and EC-3, respectively. The 166th Street segment of the Proposed Route is discussed in Section C.5.6. This alignment segment would result in significant but mitigable impacts (**Class II**).

### **C.5.9 SHOEMAKER ALTERNATIVE SEGMENT**

The Shoemaker Alternative segment is approximately 1.5 miles long and would differ from the proposed route by bypassing the Norwalk Station and connecting to the existing 16-inch pipeline to the east of the station. The Norwalk Station is classified as a high potential site with various types of contamination that will require implementation of EC-3. There are two medium (one with known or suspected hydrocarbon contamination), and one high potential sites listed along the Shoemaker Alternative Segment, thus requiring evaluation of the sites using Mitigation Measures EC-1, EC-2, and EC-3, respectively. This alignment segment would result in potentially significant but mitigable environmental impacts (**Class II**).

### **C.5.10 NO PROJECT ALTERNATIVE**

The No Project Alternative would result in greatly increased trucking of petroleum products, and increased use of existing pipelines. These activities would have no effect on existing contaminated sites.

### **C.5.11 MITIGATION MONITORING PROGRAM**

Table C.5-4 presents the mitigation monitoring program for environmental contamination.

Table C.5-4 Mitigation Monitoring Program

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Contamination from low impact potential sites could affect workers or public (Class II)	<b>EC-1</b> Reevaluate low potential sites if construction parameters vary from those defined.	All low potential sites as identified in PEA	Review summary report	Confirm absence or evidence of contamination	CPUC, DTSC, County Environmental Health Department	Prior to Project construction
Contamination from medium impact potential sites could affect workers or public (Class II)	<b>EC-2</b> Conduct a thorough review of agency records; site specific visual inspection; prepare a summary report.	All medium potential sites as identified in Table C.5-3	Review summary report	Confirm absence or evidence of offsite contamination	CPUC, DTSC, Los Angeles County Environmental Health Department	Prior to Project Construction
Contamination from high impact potential sites could affect workers or public (Class II)	<b>EC-3</b> Conduct an investigation, including sampling and laboratory analysis, to assess contaminant levels in the surface debris and underlying soil along the alignment	All high potential sites as identified in Table C.5-3	Review environmental contamination report	Compare contaminant levels to appropriate threshold concentration levels and review adequacy of health and safety plan for existing contaminants.	CPUC, DTSC, Los Angeles County Environmental Health Department	Prior to Project Construction
Contamination at Norwalk Station could affect workers or public (Class II)	<b>EC-4</b> Complete subsurface investigation at Norwalk Station prior to construction.	Norwalk Station	Review test results, DTSC/County Health Dept. Approval	Confirm absence or evidence of contamination affecting construction.	CPUC, DTSC, Los Angeles County Environmental Health Department	Prior to Project Construction
Contamination at Stations could affect workers or public (Class II)	<b>EC-5</b> Perform records searches for Watson, Industry, and Colton Stations prior to construction; rank findings, and apply appropriate measures as above.	Watson, Industry, Colton Station	Review report for compliance	Confirm absence or evidence of recorded contamination.	CPUC, DTSC, Los Angeles County Environmental Health Department	Prior to Project Construction
Encountering unanticipated contamination could affect workers or public (Class II)	<b>EC-6</b> Trained personnel shall be present continuously during active trenching to observe visual evidence of contamination and perform monitoring with appropriate testing equipment.	Along entire pipeline route	Coordinate with monitoring personnel to confirm appropriate training and understanding of testing equipment, review weekly reports prepared by monitoring personnel.	Conduct periodic site visits during construction to confirm that proper procedures are being implemented.	CPUC, DTSC, Los Angeles County Environmental Health Depts.	During Project Construction

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Pipeline passes near historic and active oil and gas fields; active or abandoned wells may be in or near pipeline ROW (Class II)	<b>EC-7</b> Contact Div. of Oil, Gas & Geothermal Resources; obtain information on oil/gas wells near pipeline route. Flag for avoidance; ensure correct abandonment.	Identified oil fields	Review oil field data and verify that avoidance flags are placed	Identified wells are avoided or correct abandonment is ensured	CPUC, California Department of Conservation, Division of Oil, Gas, and Geothermal Resources	Prior to Construction
<b>PROPOSED PROJECT AND CUMULATIVE PROJECTS</b>						
Cumulative impact on hazardous waste transporters and disposal sites (Class III)	<b>EC-8</b> The Applicant and Proponents of cumulative projects should be encouraged to utilize portable onsite treatment units or in-situ treatment prior to construction reduce transport- and treatment-related cumulative impacts	Entire pipeline route and vicinity of all cumulative projects	Review environmental contamination report and plans for treatment &/or disposal of wastes	Onsite or in-situ treatment used when practical	CPUC, County Environmental Health Departments	Prior to and during construction

**C.5.12 REFERENCES**

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