5.9 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the proposed Specific Plan on human health and the environment due to exposure to hazardous materials or conditions associated with the construction and operation of the proposed development. Potential impacts and appropriate mitigation measures or standard conditions are included as necessary. The analysis in this section is based, in part, upon the following sources:

- *Phase I Environmental Site Assessment Report,* Northgate Environmental Management, May 5, 2017 (Appendix H)
- *Focused Phase II Environmental Investigation*, Northgate Environmental Management, May 10, 2017 (Appendix I)

Complete copies of these studies are in the technical appendices of this Draft EIR.

5.9.1 Environmental Setting

5.9.1.1 AGENCIES THAT REGULATE HAZARDOUS MATERIALS

Hazardous materials are substances that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. They are used in products (e.g., household cleaners, industrial solvents, paint, pesticides, etc.) and manufacturing (e.g., of electronics, newspapers, plastic products, etc.). Examples of hazardous materials are petroleum, natural and synthetic gas, and other toxic chemicals that may be used in agriculture or commercial and industrial uses, businesses, hospitals, and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

The term "hazardous materials," as used in this section, includes all materials defined in the California Health and Safety Code Sections 25411 and 25501:

> A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Federal and state hazardous waste definitions are similar, but different enough that separate classifications are in place for federal Resource Conservation and Recovery Act (RCRA) hazardous wastes and State non-RCRA hazardous wastes.

Federal Agencies

Several federal agencies regulate hazardous materials:

- **US Environmental Protection Agency.** The EPA is the primary federal agency that regulates hazardous materials and waste. In general, the EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. EPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing trash. Under the authority of the RCRA and in cooperation with state and tribal partners, the EPA's Waste Management Division manages a hazardous waste program, an underground storage tank program, and a solid waste program, which includes development of waste reduction strategies such as recycling. The EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations.

- **Occupational Safety and Health Administration.** OSHA oversees administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from manufacturers. Material safety data sheets describe the risks associated with particular hazardous materials, and proper handling and procedures. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

- **US Department of Transportation.** The USDOT has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. The US Postal Service has developed additional regulations for the transport of hazardous materials by mail. USDOT regulations specify packaging requirements for different types of materials.

State Agencies

State agencies that regulate hazardous materials and waste in accordance with the federal and state laws include:

- **California Environmental Protection Agency:** CalEPA was created in 1991 by governor's executive order. Six boards, departments, and offices were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to ensure the coordinated deployment of state resources. CalEPA oversees hazardous materials and hazardous waste compliance throughout California. Among those responsible for hazardous materials and waste management are the Department of Toxic Substances Control (DTSC), Department of Pesticide Regulation, and Office of Environmental Health Hazard Assessment. CalEPA also oversees the unified hazardous waste and hazardous materials management regulatory program (Unified Program), which consolidates and coordinates:

    - Hazardous Materials Release Response Plans and Inventories (Business Plans)
    - Underground Storage Tank Program
    - Aboveground Petroleum Storage Tank Act
    - Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs

- California Uniform Fire Code: Hazardous Material Management Plans and Inventory Statements
- California Accidental Release Prevention Program.

- California Department of Conservation, Geologic Energy Management Division. CalGEM prioritizes protecting public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal industries, while working to help California achieve its climate change and clean energy goals. CalGEM uses science and sound engineering practices to regulate the drilling, operation, and permanent closure of energy resource wells.

- **California Department of Toxic Substances Control.** DTSC is the department of CalEPA that carries out the RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) programs in California to protect people from exposure to hazardous substances and wastes. The department regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations [CCR], Title 22, Divisions 4 and 4.5). Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow state and federal requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

- **California State Emergency Response Commission.** The federal Emergency Planning and Community Right-to-Know Act (EPCRA) has specific directives for state governments for the implementation of EPCRA at the state level. The EPCRA program as it applies to California was promulgated in the state Health and Safety Code, Title 19, and in executive orders. The federal EPCRA program is implemented and administered in California by the California Governor's Office of Emergency Services, a State Emergency Response Commission, six local emergency planning committees (LEPC), and 83 certified Unified Program agencies (CUPA) (Cal OES 2019a).

- **California Department of Forestry and Fire Protection.** CAL FIRE is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. The Office of the State Fire Marshal provides for fire prevention by enforcing fire-related laws in State-owned or -operated buildings; investigating arson fires; licensing those who inspect and service fire protection systems; approving fireworks for use in California; regulating the use of chemical flame retardants; evaluating building materials against fire safety standards; regulating hazardous liquid pipelines; and tracking incident statistics for local and state government emergency response agencies. The California Fire Plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The California Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE.

Regional Agencies

Responsible regional agencies that regulate hazardous materials and waste in accordance with federal and state laws include:

- **Orange County Health Care Agency, Environmental Health Division.** The Environmental Health Division (OCHCA-EHD) was designated as the CUPA for the County of Orange, and the county and city fire agencies have joined in partnership with the CUPA as "participating agencies." OCHCA-EHD administers all CUPA programs for the City of Brea. The CUPA is the local administrative agency that coordinates the regulation of hazardous materials and hazardous wastes in Orange County through six programs:
  - Hazardous Materials Disclosure
  - Business Emergency Plan
  - Hazardous Waste
  - Underground Storage Tank
  - Aboveground Petroleum Storage Tank
  - California Accidental Release Prevention
- **Orange County Fire Authority.** The OCFA is the agency that provides fire protection and emergency medical services for unincorporated areas of Orange County as well as 23 cities in the county that contract OCFA's services. Although t Brea is not contracted with OCFA, the local hazard mitigation plan prepared by the County of Orange and OCFA covers the city.

Local Agencies

- **Brea Fire Services Department.** The primary mission of the Brea Fire Services Department is the delivery of life-safety services. The department provides 24-hour emergency response to a wide variety of critical situations, including fires and hazardous materials incidents. In addition, the department operates a very active Fire Prevention and Emergency Preparedness Program, with fire inspections, hazardous process permitting, fire code enforcement, public education, and business emergency planning in accordance with the California Code of Regulations (Brea 2019).

5.9.1.2 REGULATORY BACKGROUND

Hazardous wastes require special handling and disposal because of their potential to impact public health and the environment. Some materials are designated "acutely" or "extremely" hazardous under relevant statutes and regulations. Hazardous materials and wastes can pose significant actual or potential hazards to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, state, and local programs regulate the use, storage, and transportation of hazardous materials and hazardous waste. These programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily conditions and as a result of emergencies.

Federal Regulations

Resource Conservation and Recovery Act of 1976

The RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984, is the principal federal law that regulates the generation, management, and transportation of waste. The RCRA gave the EPA the authority to control hazardous waste from "cradle to grave," that is, from generation to transportation, treatment, storage, and disposal. The RCRA also created a framework for the management of nonhazardous wastes. The 1984 amendments to the RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. It should be noted that the RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

CERCLA and SARA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, commonly known as the "Superfund," established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986, which

- Stressed the importance of permanent remedies and innovative treatment technologies to clean up hazardous waste sites.
- Required Superfund actions to consider the standards and requirements in other state and federal environmental laws and regulations.
- Provided new enforcement authorities and settlement tools.
- Increased State involvement in every phase of the Superfund program.
- Increased the focus on human health problems posed by hazardous waste sites.
- Encouraged greater citizen participation in site cleanup decisions.
- Increased the size of the trust fund to $8.5 billion.

CERCLA also enabled the revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priority List of Superfund sites.

Emergency Planning and Community Right-to-Know Act

EPCRA is also known as SARA Title III and was enacted by Congress as the national legislation on community safety. This law helps local communities protect public health, safety, and the environment from chemical hazards. The primary purpose of EPCRA is to inform communities and citizens of chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored

on-site to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies.

Section 3131 of EPCRA requires manufacturers to report releases to the environment (air, soil, and water) of more than 600 designated toxic chemicals, report off-site transfers of waste for treatment or disposal at separate facilities, develop pollution prevention measures and activities, and participate in chemical recycling. These annual reports are submitted to the EPA and State agencies. EPCRA Sections 301 through 312 are administered by the EPA's Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

The EPA maintains and publishes a database that contains information on toxic chemical releases and other waste management activities by certain industry groups and federal facilities. This online, publicly available, national digital database is called the Toxics Release Inventory and was expanded by the Pollution Prevention Act of 1990.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires state and local governments to prepare mitigation plans that identify hazards, potential losses, mitigation needs, goals, and strategies. It is intended to facilitate cooperation between state and local governments.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give the EPA the ability to track the 75,000 industrial chemicals currently produced by or imported into the United States. The EPA repeatedly screens these chemicals and can require reporting or testing of any that might pose an environmental or human health hazard. It can ban the manufacture and import of chemicals that pose an unreasonable risk. Also, the EPA tracks the thousands of new chemicals that industry develops each year that have either unknown or dangerous characteristics. It can control these chemicals as necessary to protect human health and the environment. The act supplements other federal statutes, including the Clean Air Act and the Toxics Release Inventory under EPCRA.

Hazardous Materials Transportation Act

The USDOT regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations (CFR). State agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). These agencies also govern permitting for hazardous materials transportation. Title 49 CFR reflects laws passed by Congress as of January 2, 2006.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and the American Red Cross that: 1) provides the mechanism for coordinating delivery of federal assistance and

resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act and individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to need federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

OSHA Regulation 29 CFR Standard 1926.62

The OSHA Regulation 29 CFR Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. It includes requirements for the safe removal and disposal of lead and the safe demolition of buildings containing lead-based paint or other lead materials.

State Regulations

California Health and Safety Code and CCR

California Health and Safety Code, Chapter 6.95, and 19 CCR Section 2729 describe the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material inventory disclosing hazardous materials stored, used, or handled on-site. A business that uses hazardous materials or mixtures containing them in certain quantities must establish and implement a business plan.

Tanner Act

Although numerous state policies deal with hazardous waste, the most comprehensive is the Tanner Act (Assembly Bill 2948), which was adopted in 1986. The Tanner Act governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in California. To be in compliance with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define 1) the planning process for waste management, 2) the permit process for new and expanded facilities, and 3) the appeals process to the state available for certain local decisions.

California Building Code

The State provides a minimum standard for building design through the California Building Code (24 CCR Part 2). The CBC is based on the International Building Code and modified for California conditions. It is generally adopted jurisdiction by jurisdiction, with further modification based on local conditions. Commercial and residential buildings are plan-checked by city and county building officials for compliance with the CBC.

Asbestos-Containing Materials Regulations

State-level agencies, in conjunction with the EPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by:

- South Coast Air Quality Management District's Rule 1403
- California Health and Safety Code (Section 39650 et seq.)
- California Code of Regulations (Title 8, Section 1529)
- California Occupational Safety and Health Administration regulations (8 CCR Section 1529)
- 40 CFR Part 61 and Part 763, and 29 CFR Part 1926

Medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings and practices to reduce risks of asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

Lead-Based Paint

OSHA's Lead in Construction Standard (8 CCR Section 1532) addresses permissible exposure limits; exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

State Hazardous Waste Management Programs

State programs that regulate hazardous materials and waste include:

Underground Storage Tank Program. Releases of petroleum and other products from USTs are the leading source of groundwater contamination in the United States. The RCRA Subtitle I establishes regulations governing the storage of petroleum products and hazardous substances in USTs and the prevention and cleanup of leaks. In EPA Region 9 (California, Arizona, Hawaii, Nevada, Pacific Islands, and over 140 tribal nations) the UST program operates primarily through state agency programs with EPA oversight. Under the umbrella of CalEPA, the State Water Resources Control Board (SWRCB) provides assistance to local agencies enforcing UST requirements. The purpose of the UST program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances. The program consists of four elements: leak prevention, cleanup, enforcement, and tank tester licensing. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs, including groundwater analytical data, the surveyed locations of monitoring wells, and other data. The SWRCB's GeoTracker system currently has information submitted by responsible parties for over 10,000 leaking UST (LUST) sites statewide and was extended to include all SWRCB groundwater cleanup programs, including the LUST, non-LUST (Spill, Leaks, Investigation, and Cleanup), Department of Defense, and landfill programs.

The OCHCA-EHD is charged with conducting compliance inspections of regulated facilities in Orange County. Regulated facilities are those that handle hazardous materials, generate or treat hazardous waste, and/or operate a UST. All new installations of USTs require an inspection, as do removals of the old tanks under strict chain-of-custody protocol.

Hazardous Materials Disclosure Programs. Both the federal government (CFR, EPA, SARA, and Title III) and the state (Health and Safety Code, Division 20, Chapter 6.95, Sections 25500–25520; 19 CCR Chapter 2, Subchapter 3, Article 4, Sections 2729–2734) require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials—termed a reporting quantity—to submit a hazardous materials emergency/contingency plan (also known as a hazardous materials business plan) to their local CUPA. The CUPA in Orange County is the OCHS-EHD, which is responsible for conducting compliance inspections of regulated facilities in Brea.

The hazardous materials business plan includes the business owner/operator identification page, hazardous materials inventory chemical description page, and an emergency response plan and training plan. Business plans must include an inventory of the hazardous materials at the facility. The entire hazardous materials business plan needs to be reviewed and recertified every three years. Business plans are required to include emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. These plans need to identify the procedures to follow for immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel. All facilities must keep a copy of their plan on-site.

Hazardous materials business plans are designed to be used by responding agencies, such as the Brea Fire Department, during a release or spill to allow for a quick and accurate evaluation of each situation for appropriate response. Businesses that handle hazardous materials are required by law to provide an immediate verbal report of any release or threatened release of hazardous materials if there is a reasonable belief that the release or threatened release poses a significant present or potential hazard to human health and safety, property, or the environment. If a release involves a hazardous substance listed in Title 40 of the CFR in an amount equal to or exceeding the reportable quantity for that material, a notice must be filed with Cal OES within 15 days of the incident.

Hazardous Materials Incident Response. Under Title III of SARA, the LEPC is responsible for developing an emergency plan for preparing for and responding to chemical emergencies in that community. The State Emergency Response Commission established six Emergency Planning Districts. It appointed a LEPC for each planning district and supervises and coordinates their activities.

The emergency plan developed by the LEPCs must include:

- An identification of local facilities and transportation routes where hazardous material are present.
- The procedures for immediate response in case of an accident (this must include a community-wide evacuation plan).

- A plan for notifying the community that an incident has occurred.
- The names of response coordinators at local facilities.
- A plan for conducting exercises to test the plan.

The LEPC membership must include (at a minimum):

- Elected state and local officials
- Police, fire, civil defense, and public health professionals
- Environment, transportation, and hospital officials
- Facility representatives
- Representatives from community groups and the media (Cal OES 2019b)

The City of Brea is in LEPC Region I comprising the counties of Los Angeles, Orange, San Luis Obispo, Santa Barbara, and Ventura.

Hazardous Material Spill/Release Notification Guidance. All significant spills, releases, or threatened releases of hazardous materials must be immediately reported. Federal and state emergency notification are required for all significant releases of hazardous materials. Requirements for immediate notification of all significant spills or threatened releases cover owners, operators, persons in charge, and employers. Notification is required regarding significant releases from facilities, vehicles, vessels, pipelines, and railroads. The following state statutes require emergency notification of a hazardous chemical release:

- Health and Safety Code, Sections 25270.7, 25270.8, and 25507
- Vehicle Code, Section 23112.5
- Public Utilities Code, Section 7673 (PUC General Orders #22-B, 161)
- Government Code, Sections 51018, 8670.25.5(a)
- Water Code, Sections 13271, 13272
- California Labor Code, Section 6409.1(b)10

In addition, all releases that result in injuries or harmful exposure of workers must be immediately reported to Cal OSHA (California Labor Code, Section 6409.1 [b]). Additional reporting requirements are in the Safe Drinking Water and Toxic Enforcement Act of 1986, better known as Proposition 65, and Section 9030 of the California Labor Code.

California Accidental Release Prevention Program. CalARP became effective on January 1, 1997, in response to Senate Bill 1889. CalARP replaced the California Risk Management and Prevention Program. Under CalARP, Cal OES must adopt implementing regulations and seek delegation of the program from the EPA. CalARP aims to be proactive and therefore requires businesses to prepare risk management plans, which are detailed engineering analyses of the potential accident factors at a business and the mitigation measures that can be implemented to reduce this accident potential. In most cases, local governments have

the lead role for working directly with businesses in this program. The OCHCA-EHD is the CUPA designated as the administering agency for CalARP.

Regional Regulations

Asbestos Emissions from Demolition/Renovation Activities

South Coast Air Quality Management District (SCAQMD) Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) provides requirements for limiting asbestos emissions from building demolition and renovation activities.

Local Hazard Mitigation Plan

Orange County's local hazard mitigation plan (LHMP) was approved by the Federal Emergency Management Agency in November 2015. The LHMP is a multi-jurisdiction plan developed jointly by the County of Orange, a local government, and the OCFA. The LHMP focuses on mitigating all natural hazards impacting unincorporated areas of the county as well as County- and OCFA-owned facilities. The City of Brea is a member of the Orange County Emergency Management Organization, which is a standing subcommittee of the Orange County Operational Executive Board tasked with developing and reviewing plans across the County to ensure consistency.

OCFA Combustible Soil Gas Hazard Mitigation: Guideline C-03

OCFA Guideline C-03 is intended as guidance for the scientific investigation, remediation, and/or mitigation of potentially hazardous concentrations of combustible soil gases associated with the construction and occupancy of a building or structure that is located within:

- Any location within an administrative boundary or a distance less than or equal to 100 feet beyond the administrative boundary of any oil/gas field that has been defined by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR).
- A distance less than or equal to 100 feet from any active or abandoned oil/gas well that is not within the administrative boundary of an oil field as defined by the DOGGR.
- A distance of less than or equal to 300 feet from any gas seepage zone.

Local Regulations

City of Brea General Plan

The City of Brea General Plan, Chapter 6, Public Safety, includes goals and policies aimed at ensuring public safety and protecting the community from hazards associated with hazardous materials, wildland fires, flooding, and seismic activity and geologic conditions. Applicable policies include:

- **Policy PS-4.2.** Reduce the risks associated with ground transportation hazards.

- **Policy PS-4.3.** Work with responsible Federal, State, and County agencies to identify and regulate the disposal of toxic materials.

- **Policy PS-4.4.** Provide education and information to City residents regarding the proper use and disposal of household hazardous materials.

City of Brea Municipal Code

City of Brea Municipal Code Title 8, Health, Safety, and Welfare, provides for the preparation and carrying out of plans for the protection of people and property in the event of an emergency, as well as provides information on the storage, accumulation, collection, and disposal of refuse, trash, rubbish, solid waste, debris, other discarded materials, and recyclable materials. Title 8 includes the following chapters:

- **Chapter 8, Emergency Preparedness:** The purposes of this chapter are to provide for the preparation and carrying out of plans for the protection of persons and property within the city in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of the city with all other public agencies, corporations, organizations and affected private persons.

- **Chapter 8.24, Oil and Oil Wells:** Provides minimum health and safety standards for oil and gas exploration, drilling and production sites.

- **Chapter 8.28, Solid Waste Collection:** This chapter provides regulations designed to eliminate or alleviate issues associated with storage, accumulation, collection and disposal of refuse, trash, rubbish, solid waste, debris and other discarded material, as well as recyclable material. Solid waste is a matter of great public concern, in that improper control of such matters creates a public nuisance, which may lead to air pollution, fire hazards, illegal dumping, vector breeding and infestation and other problems affecting the health, welfare and safety of the residents of the city and adjacent communities.

- **Chapter 8.42, Pipeline Franchises:** Establishes rules, regulations, restrictions and terms and conditions associated with the granting of a franchise for pipelines used for the collection, transportation or distribution of oil, gas, gasoline, petroleum, wet gas, hydrocarbon substances, water, waste water, mud, steam, and other liquid and gaseous substances which are not more hazardous than the aforementioned substances.

City of Brea Emergency Preparedness Program

The City of Brea's Emergency Preparedness Program is coordinated by a professional emergency manager. The Emergency Preparedness Program consists of five elements:

- Development and maintenance of the City's Emergency Response Plan.

- Development and maintenance of the City's Emergency Operations Center.

- Coordination of preparedness, training, and exercises for City staff to be sure they are ready to respond to any emergency.
- Public education and outreach to the residents and businesses of Brea.
- Fund recovery following disasters.

5.9.1.3 EXISTING CONDITIONS

Historical and Current Use of the Project Site

An approximately 100-acre portion of the project site west of Valencia Avenue is currently developed with an active oil production field and nurseries. Greenland Nursery is located north of Lambert Road, and Future Foods Farms, an organic food growing company, is located south of Lambert Road and also utilizes a portion of the property for agricultural purposes. Oil field operations at this portion of the project site began in the 1920s, and agricultural uses were initiated in the 1930s. Figure 5.9-1, *Project Site Reconnaissance – West of Valencia Avenue*, illustrates current and historical features of approximately 100 acres of the project site west of Valencia Avenue.

The northern portion of the project site east of Valencia Avenue is an active oil production field (see Figure 5.9-2, *Project Site Reconnaissance – East of Valencia Avenue*). The southern portion of the project site east of Valencia Avenue, totaling approximately 43 acres, is occupied by a seasonal pine tree farm (Peltzer Pines Live Christmas Tree Farm). Although not observed during the Phase I site reconnaissance, the project site contains historical "sump" areas that were utilized for oil field drainage and waste storage prior to being filled in the 1960s. Historical sumps have been identified from historical aerial photographs as unlined areas historically utilized for the storage of waste oil and oil-field-related waste liquids. Oil field operations at the portion of the project site began in 1927, and agricultural uses, including orchards and tree farms, were in the 1950s.

A total of 104 oil wells and related dehydration unit, vapor recovery system, production unit and tank farm, and a carbon filtration area are currently operating at the project site. Operations at the oil fields included USTs and aboveground storage tanks (ASTs) for the storage and containment of gasoline, diesel, crude oil, and other processed hydrocarbons. Petroleum and steam pipelines are also present throughout the project site as both above- and below-ground features.

Phase I ESA Recognized Environmental Conditions

A recognized environmental concern (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The Phase I ESA identified these RECs in connection with the property:

- The project site has been an operating oil field since the 1920s. There are active oil wells, and various levels of ponded oil and staining were observed at each well, primarily in the vicinity of the well box. The

historical and current operations of the oil field, including the oil wells, tank farms, and pipelines, represent a potential threat to soil, groundwater, and/or soil vapor quality at the subject site.

- Multiple historical oil sumps, including a large, former, unlined oil sump located in the southwestern portion of the site east of Valencia Avenue, were present across the subject site. These historic sumps represent a potential threat to soil, groundwater, and/or soil vapor quality at the site.

- Petroleum and natural gas pipelines are present throughout portions of the project site. Petroleum hydrocarbons or other hazardous materials releases may have occurred along the pipelines.

Additionally, the Phase I identified the following potential environmental concerns:

- A drainage channel that traverses the project site west of Valencia Avenue from north to south potentially contains contaminated runoff from the Olinda Alpha Landfill.

- Given the historical use of the project site for agricultural purposes, there is a possibility of pesticides and herbicides in shallow soil in some areas of the project site.

- Test results from indoor air samples collected within the local zip code area indicate that radon may constitute a potential environmental concern at the project site.

- Injection wells are present at the project site and are subject to many new regulations. Further review of specific requirements for closing out the existing injection wells may be required prior to development of the project site.

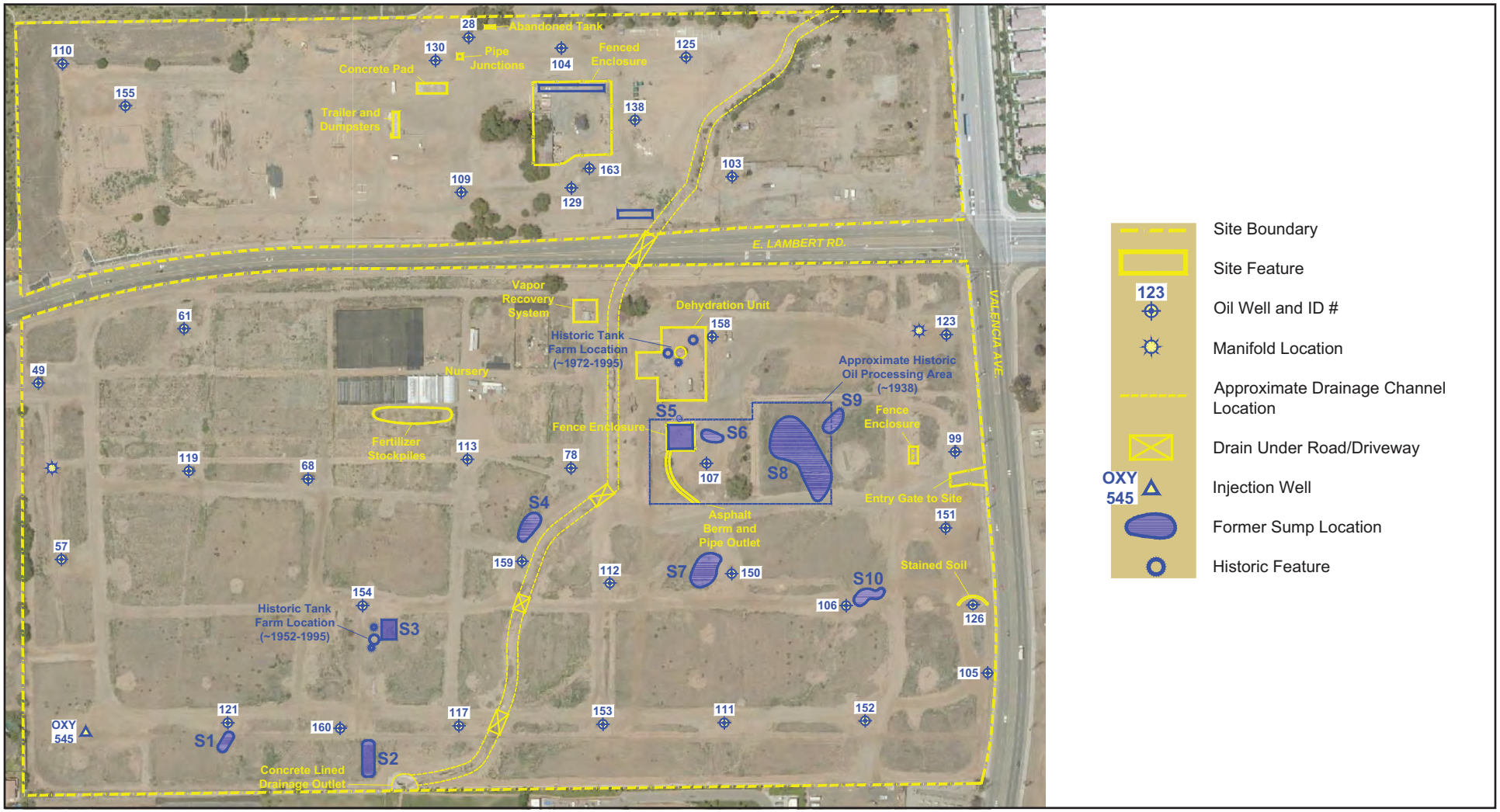
A controlled recognized environmental condition refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. No controlled recognized environmental conditions were identified during the course of this assessment.

Historic REC (HREC) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The Phase I ESA identified the following HREC at the project site:

- The project site west of Valencia Avenue has a documented release from a leaking diesel UST that impacted soil to depths of 90 feet below ground surface (bgs). The facility received regulatory closure from the OCHCA on August 20, 1991. However, no remedial action was performed, and petroleum hydrocarbons remain in soil at the project site.

Based on the RECs, HRECs and other potential environmental concerns identified in the Phase I ESA, a Phase II Environmental Site Assessment (Phase II ESA) was recommended and prepared. The Phase II ESA is included as Appendix I to the DEIR.

Figure 5.9-1 - Project Site Reconnaissance - West of Valencia Avenue
5. Environmental Analysis



Source: Northgate, 2017

5. Environmental Analysis
HAZARDS AND HAZARDOUS MATERIALS

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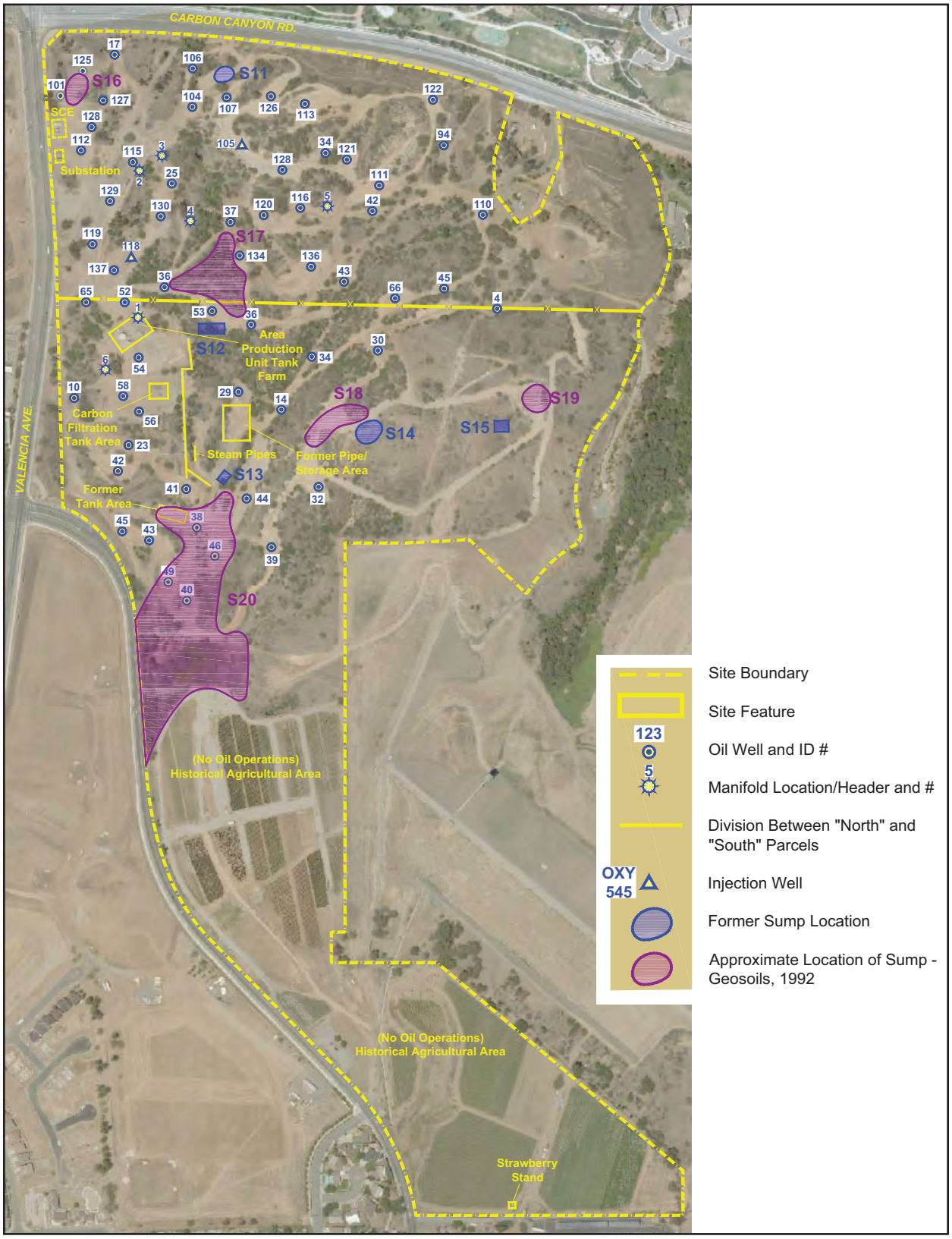
Figure 5.9-2 - Project Site Reconnaissance - East of Valencia Avenue

5. Environmental Analysis



Source: Northgate, 2017

5. Environmental Analysis
HAZARDS AND HAZARDOUS MATERIALS

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Phase II Environmental Site Assessment

The Phase II investigation focused on evaluating potential subsurface contamination impacts at specific features of potential environmental concern identified in the Phase I. The Phase II ESA scope of work included walking the site to mark the proposed boring locations, preparing a site-specific health and safety plan, collecting and analyzing soils samples collected from the project site, and conducting a soil vapor survey. Soil samples were collected by excavating 14 trenches, 4 shallow hand-auger borings, 2 deeper hollow-stem auger borings, and 2 direct-push GeoProbe borings. Figures 5 and 6 of the Phase II ESA (DEIR Appendix I) show soil sampling locations, including the oil-field vapor recovery system area, dehydration unit area, drainage channel, abandoned tank, the Brea-Olinda Tank Farm, piping header area, and historic sump locations. The collected samples were analyzed as follows; and abbreviations are defined below.

- 78 soil samples for TPH-cc (total petroleum hydrocarbons carbon chain)
  - 51 samples from east of Valencia Avenue and 27 samples from west of Valencia Avenue
- 21 soil samples for TPH-g (total petroleum hydrocarbons quantified as gasoline), VOCs (volatile organic compounds), SVOCs (semivolatile organic compounds)
- 17 soil samples for Title 22 metals (17 metals)
- 9 soil samples for uranium
- 14 soil samples for PCBs (polychlorinated biphenyl)
- 5 soil samples for OCPs (organochlorine pesticides), OPPs (organophosphorus pesticides), and chlorinated herbicides
- A soil vapor sample was analyzed for VOCs

Subsurface Conditions

Project Site West of Valencia Avenue

- A strong odor in the surface soils with an approximately 2-inch hydrocarbon layer at the trench from the eastern part of the vapor recovery system area.
- Occasional staining in approximately the upper 8 feet of soil at sump S3.
- A very light hydrocarbon staining in sump S5 in the upper 2 to 3 feet, followed by a heavier staining and stronger hydrocarbon odor to 10 feet bgs. Light staining to the total depth of 17 feet bgs.
- Heavy hydrocarbon staining and a strong odor in sump S8 between depths of approximately 8 to 43 feet bgs. A hydrocarbon odor to the total depth of 56 feet bgs, and staining observed between 50 and 56 feet bgs.

Project Site East of Valencia Avenue

- Surface soils within the upper one foot in the southeastern part of the Brea-Olinda Tank Farm have a darker color due to staining. However, no staining or odor was observed at deeper depths.
- Black staining in the southern portion of sump S20 between 4 and 7 feet bgs, and approximately 3 to 6 inches of staining in the northern part of sump S20.

Data Evaluation Criteria

The Phase II ESA evaluated soil sample testing results by using the regional screening levels (RSL) established by EPA Region 9 and the modified screening levels (SL) established by DTSC. Both screening levels are health-based exposure concentrations to chemicals of concern in both residential and commercial land use, but are not regulatory cleanup standards.

Soil samples analyzed for TPH were also evaluated using the Regional Water Quality Control Board's TPH maximum soil screening level, which is used to evaluate the potential threat to groundwater and to close investigations for petroleum- and VOC-impacted sites.

Soil vapor sample test results are compared to EPA RSLs and DTSC SLs for residential and commercial land use.

Soil Sampling Analytical Results

TPH: TPH was detected above laboratory reporting limits (RL) in 18 of the 51 samples analyzed from the project site east of Valencia Avenue and in 5 of the 27 samples analyzed from west of Valencia Avenue. The samples from vapor recovery system, dehydration units, abandoned tank, Brea Olinda Tank Farm, and manifold did not exceed the RLs or no TPH was detected. The areas of soil samples above RLs include historical sump locations.

VOCs and SVOCs: Several VOCs and SVOCs were detected above the laboratory RLs in samples collected on the project site west of Valencia Avenue. None of the reported concentrations of VOCs and SVOCs exceed their respective regulatory screening criteria. VOCs are from a wide range of sources—hydrocarbon products, aerosol sprays cans, cleaners and disinfectants, paints and glues, etc. VOCs and SVOCs were not reported above their laboratory RLs in any samples collected from the project site east of Valencia Avenue.

Metals and uranium: Low concentrations of several metals, including barium, chromium, cobalt, copper, nickel, vanadium, and zinc, were identified in all 16 of the samples analyzed. Low levels of uranium were also detected in 9 soil samples analyzed for uranium. However, none of the samples contained concentrations above their respective regulatory screening criteria for residential or commercial land use, or in the case of arsenic and vanadium, above naturally occurring background concentrations. The reported concentrations of all metals were within the range of generally accepted background levels.

PCBs: PCBs were not reported above their respective laboratory RLs in any of the 14 samples analyzed, except for a single detection of Aroclor-1260. Aroclor-1260 was detected in the drainage channel in the project site east of Valencia Avenue, but the concentration did not exceed any regulatory screening criteria.

OCP, OPP, and chlorinated herbicides: OCPs, OPPs, and chlorinated herbicides were not detected above their respective laboratory RLs in any of the four samples collected.

Soil Vapor: A number of VOCs were detected in the vapor sample, but none of the identified concentrations of VOCs exceed their respective residential or commercial soil vapor RSLs or calculated SLs.

Groundwater

The project site is located on the northern edge of the Coastal Plain of Orange County, a subunit of the Central Plain of the Orange County Groundwater Basin. The project site is located within the Forebay area of the Orange County Groundwater Basin, in the Yorba Linda subbasin. The Yorba Linda subbasin has very little groundwater pumping due to the high total dissolved solids concentrations and low transmissivity. Groundwater from the Yorba Linda subbasin flows southward into the main groundwater basin.

The topography of the project site is gently sloping with drainage flowing primarily to the south in various natural drainages that eventually run to storm drains, channels, or seasonal streams. Near the ground surface, groundwater generally exists in zones beneath the arroyo drainages or as discontinuous perched water zones in the sediments.

According to the Orange County Water District, groundwater is present in the principal aquifer zone at approximately 280 feet bgs in the project area. The principal aquifer zone is where most groundwater production occurs, and groundwater was not encountered in the borings advanced to a maximum depth of 60 feet bgs during site investigation. No groundwater contamination is present.

School

There is one school within a quarter mile of the project site. Olinda Elementary School, at 3145 East Birch Street, is approximately 500 feet south of the project site. Country Hills Elementary School and Heights Christian School are more than a mile to the east.

Airports

The project site is not in an Airport Environs Land Use Plan or within two miles of a public airport or public use airport.

5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

H-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.

H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area.

H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

5.9.3 Plans, Programs, and Policies

Regulatory Requirements

PPP HAZ-1 Any project-related hazardous materials and hazardous wastes will be transported to and/or from the project site in compliance with applicable state and federal requirements, including the US Department of Transportation regulations listed in the Code of Federal Regulations (Title 49, Hazardous Materials Transportation Act); California Department of Transportation standards; and the California Occupational Safety and Health Administration standards.

PPP HAZ-2 Any project-related hazardous waste generation, transportation, treatment, storage, and disposal will be conducted in compliance with the Subtitle C of the Resource Conservation and Recovery Act (Code of Federal Regulations, Title 40, Part 263), including the management of nonhazardous solid wastes and underground tanks storing petroleum and other hazardous substances.

PPP HAZ-3 Development within the Specific Plan will be designed and constructed in accordance with the regulations of the Orange County Health Care Agency, Environmental Health Department (OCHCA-EHD), which serves as the designated Certified Unified Program Agency (CUPA). The proposed project will be designed and constructed in accordance with the regulations of the OCHCA-EHD, which, as the designated CUPA, implements state and federal regulations for the following programs: (1) Hazardous Waste Generator Program, (2) Hazardous Materials Release Response Plans and Inventory Program, (3) California

Accidental Release Prevention, (4) Aboveground Storage Tank Program, and (5) Underground Storage Tank Program.

PPP HAZ-4 Any project-related underground storage tank (UST) removals will be conducted in accordance with the California UST Regulations (California Code of Regulations, Title 23, Chapter 16). Any unauthorized release of hazardous materials will require release reporting, initial abatement, and corrective actions that will be completed with oversight from the Regional Water Quality Control Board, Department of Toxic Substances Control, Brea Fire Department, South Coast Air Quality Management District, and/or other regulatory agencies, as necessary.

PPP HAZ-5 Any project-related demolition activities that have the potential to expose construction workers and/or the public to asbestos-containing materials or lead-based paint are required to be conducted in accordance with applicable regulations, including, but not limited to:

- South Coast Air Quality Management District's Rule 1403
- California Health and Safety Code (Section 39650 et seq.)
- California Code of Regulations (Title 8, Section 1529)
- California Occupational Safety and Health Administration regulations (California Code of Regulations, Title 8, Section 1529 [Asbestos] and Section 1532.1 [Lead])
- Code of Federal Regulations, Title 40, Part 61 (asbestos); Title 40, Part 763 (asbestos); and Title 29, Part 1926 (asbestos and lead)

PPP HAZ-6 Any project-related new construction, excavations, and/or new utility lines within 10 feet of or crossing existing high-pressure pipelines, natural gas/petroleum pipelines, or electrical lines greater than 60,000 volts will comply with the California Code of Regulations, Title 8, Section 1541.

PPP HAZ-7 The proposed project will comply with the requirements of the City of Brea Municipal Code, Title 8, Health, Safety, and Welfare, and all applicable design and safety standards and regulations in the California Building Code.

5.9.4 Environmental Impacts

The following impact analysis addresses the thresholds of significance; the applicable thresholds are identified in brackets after the impact statement.

Impact 5.9.1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. [Threshold H-1]

The project site includes uses such as active and historical oil field uses, nurseries, and agricultural uses. Project construction would require removal and demolition of these uses prior to development of 1,100

residential units and associated amenities. The handling, use, transport, and disposal of hazardous materials during construction, including contaminated soil remediation, would be required to comply with existing regulations of several agencies—the EPA, OCHCA EHD, OSHA, California Division of Occupational Safety and Health, and USDOT. Construction activities would be temporary and would cease upon completion of construction phase. Furthermore, project construction workers would be trained on the proper use, storage, and disposal of hazardous materials. Therefore, a less than significant impact would occur during construction.

The proposed project involves residential development; therefore, project maintenance and operation would only use typical household chemicals such as cleaners, solvents, paints, and other custodial products and small amount of herbicides for gardening and landscaping. These materials would be used in relatively small quantities, clearly labeled, and stored in compliance with state and federal requirements. With the exercise of normal safety practices, the project would not create substantial hazards to the public or the environment. Therefore, a less than significant impact would occur during operation.

Level of Significance Before Mitigation: Less than significant impact with the implementation of PPP HAZ-1 through PPP HAZ-7.

Impact 5.9.2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. [Threshold HAZ-2]

On-Site Soil Impacts

The project site contains RECs and other environmental concerns at concentrations that exceed the applicable regulatory screening levels for residential and commercial land uses, as described in Section 5.9.1.3, *Existing Conditions*. The majority of environmental concerns listed were related to current and historical oil-field-related contaminants, such as hydrocarbons. Impacted areas are generally confined to the upper layers as a result of the large amount of clay in subsurface soils, except for certain historical production sumps where the impact extended to at least 56 feet bgs. In addition to the specific areas identified in the Focused Phase II ESA, the following describes potential environmental concerns that are associated with oil production activities within the project site in the areas that were not tested in the Focused Phase II ESA:

- **Oil releases from broken pipelines.** Buried and above-ground pipelines often exist in oil fields. These pipelines carry crude oil, water, and natural gas from the oil wells to storage tanks. A pipeline rupture would result in the release of crude oil that could impact the surrounding soils.

- **Oil releases from above-ground and underground storage tanks.** Oil-stained soils are often encountered adjacent to storage tanks. Releases may occur if a pipeline connected to a tank ruptures, if a tank is punctured or damaged, or during the transfer of crude between a storage tank and transport vehicles. Released oil could impact the surrounding soils.

- **Spilled refined fuels in the operation and maintenance of oil-field vehicles and generators.** Oil fields often have an equipment maintenance area where equipment and supplies are stored and where

generators and other pumping equipment are serviced. Refined fuel storage tanks are often in these areas to supply fuel for the vehicles used in servicing and maintaining the oil field. Spills of refined product could impact soil. Refined fuels pose a greater hazard to the environment than crude oil because the lighter hydrocarbon fractions in refined fuels are more soluble and volatile. Some of the constituents in gasoline and diesel fuel, including benzene, toluene, ethylbenzene, and isomers of xylene, are known to be harmful to human health.

- **Tank-bottom material used to oil roads.** Historically, road oiling was a common practice in oil fields to control dust. The oiling material was typically a residue consisting of water, oil, sediment, and sludge from storage tanks.

- **Formation water spilled onto the ground surface.** Formation water—often with high concentrations of total dissolved solids and approximating saline water in chemical composition—is often produced as part of the development of an oil field. If large quantities of this saline water are disposed of onto the ground surface and the water infiltrates the soil, the water quality of any near-surface aquifers can be impacted.

Table 5.9-1, *On-Site Impacted Soil Summary*, summarizes the impacted soils areas and soil volume that require excavation. As shown, 90,784 cubic yards (cy) of soils from the project site west of Valencia Avenue and 87,491 cy of soils from the project site east of Valencia Avenue—a combined total of 178,275 cy—are estimated to be impacted across the project site and require relocation, treatment, and/or off-site disposal. The estimated total includes additional soil to be removed to accommodate proper sloping for safe excavation activities but does not include the removal of clean overburden soil. Detailed volume calculations are included in Table 7 of the Focused Phase II ESA (Appendix I to the DEIR).

Table 5.9-1 On-Site Impacted Soil Summary

Location	Description	Impacts Soil Volume
Project Site West of Valencia		
Vapor Recovery System	Feature estimated to be 50% impacted to a depth of approximately 10 feet bgs.	512 cy
Dehydration Unit	Area estimated to be 35% impacted to a depth of approximately 10 feet bgs.	2,574 cy
Historic Sump S3	Sump estimated to be 30% impacted to a depth of approximately 10 feet bgs	111 cy
Historic Sump S5	Area estimated to be 100% impacted to a depth of approximately 17 feet bgs.	2,151 cy
Historic Sump S7	Sump estimated to be 30% impacted to a depth of approximately 10 feet bgs.	257 cy
Historic Sump S8	Area estimated to be 100% impacted to a depth of approximately 50 feet bgs. The sump is known to be impacted to at least 56 feet bgs, the deepest depth explored. Remediation of this sump is planned to include excavation to 50 feet bgs followed by the placement of a liner and the treatment of deeper impacts *in situ*.	27,440 cy
Drainage Channel	Feature estimated to be between 75% and 80% impacted to a depth of approximately 2.5 feet bgs.	11,247 cy
Oil Wells/Roads./Former Agricultural Use/Additional Historic Sumps	Excavation volumes were also estimated for additional project site features identified to be of potential environmental concern that were not directly investigated in the Focused Phase II ESA.	46,492 cy
	Subtotal	**90,784 cy**
Project Site East of Valencia		
Brea-Olinda Tank Farm	Area estimated to be 25% impacted to a depth of approximately 5 feet bgs.	763 cy
Manifolds and Pipelines	Feature estimated to be 10% impacted to a depth of approximately 10 feet bgs and includes 6 manifolds and pipeline areas.	830 cy
Historic Sump S20	Sump estimated to be 50% impacted to a depth of approximately 7 feet bgs.	16,597 cy
Oil Wells/Roads/Former Agricultural Use/Additional Historic Sumps	Excavation volumes were also estimated for additional site features identified to be of potential environmental concern that were not directly investigated in the Focused Phase II ESA.	69,301 cy
	Subtotal	**87,491 cy**
	Total	**178,275 cy**

Source: Northgate 2017b.

As shown in Table 5.9-1, the proposed project would require relocation, treatment, and/or off-site disposal of approximately 178,275 cy of impacted soils from the project site. The total volume is an estimate only, and further investigation is necessary to further define and evaluate the vertical and lateral extent of impacted soils, not only in the historic sumps and drainage channels that were already included in the Focused Phase II ESA, but in other areas of the project site that were identified in the Phase I ESA and the Focused Phase II ESA as potential environmental concerns.

Methane Impact

The proposed project allows for residential development on a remediated oil field that has a potential for hazardous fire conditions due to methane release. Methane occurs as natural gas in oil and gas fields as a byproduct of petroleum production. Methane is lighter than air, colorless, odorless, noncarcinogenic, and flammable. When methane is mixed with other gases like carbon dioxide or hydrocarbons, the methane gas mixtures typically have densities comparable to or less than air. The primary mechanisms for methane migration in the subsurface are pressure driven flow and diffusion. Methane will migrate from areas where it

is present at higher pressures or concentrations to areas where it is present at lower pressures or concentrations. Since methane is lighter than air, it has a tendency to rise from depth to the ground surface where it dissipates into the atmosphere. Where a relatively impermeable barrier, e.g., a concrete slab, is present at the ground surface, the potential exists for methane to accumulate beneath that barrier. Methane is an asphyxiant and is combustible and potentially explosive when it is present at concentrations in excess of 53,000 parts per million by volume in the presence of oxygen. According to DTSC, with concentrations in excess of 5,000 parts per million by volume, it is often conservatively presumed that methane may infiltrate through flooring material or cracks, accumulate under footings and in enclosed spaces (e.g., small rooms, vaults, wall spaces), and cause a fire or explosion when an ignition source is present (e.g., pilot flame, electrical spark, cigarette) (DTSC 2005). Therefore, there is a potential for methane to be a significant impact.

Level of Significance Before Mitigation: Potentially significant impact.

Impact 5.9-3: The proposed project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school. [Threshold H-3]

The Olinda Elementary School is 500 feet south of the project site. The project site is an active oil field, and there are a number of RECs and HRECs that require remediation. The proposed project is required to comply with PPP HAZ-1 through PPP HAZ-7. However, even with the required regulatory requirements, the proposed project could result in hazardous emissions and handling of hazardous or acutely hazardous materials, substance, or wastes that could adversely affect Olinda Elementary School.

During operation, the proposed project would not involve any uses that emit hazardous emissions or handle hazardous materials.

Level of Significance Before Mitigation: Potentially significant impact**.**

Impact 5.9-4: The project site is on a site that is on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. [Threshold HAZ-4]

The project site is listed on a number of regulatory databases:

- The UST database indicates that three USTs were formerly present at the portion of the site west of Valencia Avenue, including a 555-gallon gasoline UST, a 555-gallon diesel UST, and a 1,000-gallon gasoline UST.

- The LUST database indicates that soil was impacted by a release of diesel fuel, additives, and gasoline from one or more of the USTs at the project site. The facility received regulatory closure from the OCHCA in August of 1991, although no impacted soil was removed, and no remediation occurred in connection with the release(s).

- The Underground Injection Control database indicates the presence of both active and plugged underground injection wells associated with oil field wastewater disposal and other oil field operations.

- The project site is listed on the Hazardous Waste Information System database related to the storage, bulking, and transfer off-site of approximately seven tons of unlisted product in 2012 from a Southern California Edison electrical transformer area.

- The project site is listed on the GeoTracker website for releases from gasoline and diesel USTs impacting soil at the site. The listing identifies Shell Western Oil Products as the responsible party for the release referenced at 2701 Valencia Avenue. The release was reported in 1988 and received regulatory closure from the Orange County Local Oversight Program and the Regional Water Quality Control Board on August 20, 1991.

- The National Pipeline Mapping System online mapping system identified three active pipelines abutting or traversing the project site. Two pipelines are owned and operated by Exxon-Mobil and listed to contain gasoline. The third pipeline is owned and operated by Southern California Edison and is listed to contain natural gas. No accidents or incidents are identified for the pipelines at the project site or in the vicinity. The presence of these pipelines represents a potential environmental threat to the soil, groundwater, and/or soil vapor quality at the project site.

The removal of any ASTs or USTs on-site shall be conducted in accordance with the regulations of OCHCA-EHD, which serves as the designated CUPA. The OCHCA-EHD implements state and federal regulations for the Aboveground Storage Tank Program and Underground Storage Tank Program. Furthermore, any UST removals will be conducted in accordance with the California UST Regulations (23 CCR Chapter 16).

Any project-related new construction, excavations, and/or new utility lines within 10 feet or crossing existing high-pressure pipelines, natural gas/petroleum pipelines, or electrical lines greater than 60,000 volts will be conducted in accordance with 8 CCR Section 1541.

The project site is listed in a number of hazardous materials sites, and therefore could create a significant hazard to the public or the environment if not the materials are properly removed or sites remediated.

Off-Site

The properties to the north of the project site have historically been developed as oil fields, including the Olinda Alpha Landfill. The area south of the project site is developed with an electric substation owned and operated by Southern California Edison. The remaining areas of the project site vicinity have historically been used as agricultural land prior to development for residential uses during the 1980s and 1990s. No hazardous materials releases have been documented in the immediate vicinity of the project site that represent a potential threat to soil, groundwater, or soil vapor quality at the project site.

Level of Significance Before Mitigation: Potentially significant impact.

Impact 5.9-5: The project site is not within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. [Threshold H-5]

The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport is Fullerton Municipal Airport approximately 7.65 miles southwest of the project site. Implementation of the proposed project would not result in a significant impact related to any public airport.

Level of Significance Before Mitigation: No impact.

Impact 5.9-6: Project development would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. [Threshold H-6]

The Brea Fire Department provides emergency response for hazardous material incidents and administers the Fire Prevention and Emergency Preparedness Programs. The Emergency Preparedness Program consists of the development and maintenance of the City's Emergency Response Plan and the City's Emergency Operations Center. The program addresses appropriate responses to major earthquakes, hazardous materials accidents, wildfire, and dam failure. The program describes how emergency response will be coordinated and how evacuation of residents will proceed. Program objectives include injury reduction and avoiding loss of life and property damage through effective management of emergency forces.

The cities of Anaheim and Huntington Beach have entered into a joint powers agreement to form the Orange County-City Hazardous Materials Emergency Response Authority (OCCHMERA). Anaheim and Huntington Beach provide two hazardous materials response teams, which in turn, provide hazmat emergency service for the cities of Brea, Costa Mesa, Fountain Valley, Fullerton, Garden Grove, Newport Beach, and Orange. Furthermore, the OCCHMERA team consists of highly trained hazardous materials specialists supported by certified operational first responders and responds to incidents involving a release or potential threat of hazardous materials and wastes that poses a risk to citizens. This includes spills, leaks, abandonment, and/or industrial process accidents as well as physical, chemical, biological, or radiological hazards in the community (Anaheim 2019).

During the construction and operation phases of the proposed Specific Plan, development would not interfere with any of the daily operations of the Brea Fire Department or the OCCHMERA team, which support emergency planning and response efforts in Brea. All construction activities would be performed according to the City's and Brea Fire Department's standards and regulations. The proposed development would be required to provide the necessary on- and off-site access and circulation for emergency vehicles and services during the construction and operation phases.

The proposed development would also be required to go through the City's development review and permitting process and incorporate all applicable design and safety standards and regulations in the CBC and the City's municipal code to ensure that project development does not interfere with the provision of local emergency services (provision of adequate access roads to accommodate emergency response vehicles, adequate numbers/locations of fire hydrants, etc.).

Based on the preceding, implementation of the proposed Specific Plan (both the construction and operational phases) would not impair implementation of or physically interfere with emergency response or evacuation plans. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Less than significant impact with the implementation of PPP HAZ-7.

Impact 5.9-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. [Threshold H-7]

A portion of the project site is in a State Responsibility Area and is adjacent to land classified as a very high fire hazard severity zone. Impacts associated with wildland fires are discussed in detail in Chapter 5.20, *Wildfire*. With the implementation of regulatory requirements (PPP WI-1 and PPP WI-2), the proposed development would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and the impact would be less than significant.

Level of Significance Before Mitigation: Less than significant impact with the implementation of PPP WI-1 and PPP WI-2.

5.9.5 Cumulative Impacts

Oil field remediation involves site-specific activities and would not add to or combine with similar site-specific impacts that may occur during future development in Los Angeles and Orange counties and adjacent cities. No dangerous activities or significant use of hazardous substances presently occur or are anticipated in the existing or future residential areas. No adverse cumulative impacts related to hazardous substances or the creation of any health hazards are anticipated as a result of this project.

Full buildout of the Specific Plan would add 1,100 new households to the immediate area. Development of a large-scale residential community will substantially reduce the present level of wildland fire hazard in northern Orange County and southeastern Los Angeles County. This would result from conversion of large areas of presently natural, flammable landscape into an urbanized landscape that includes noncombustible vegetation, on-site irrigation, a pressurized water system and fire hydrants, and improved site access. As a result, implementation of the Specific Plan and other cumulative development in the area are expected to significantly reduce the fire hazard potential. The proposed project would not result in a cumulatively considerable wildfire impact.

5.9.6 Level of Significance Before Mitigation

Upon implementation of the plans, programs, and policies, some impacts would be less than significant: 5.9-1, 5.9-5, 5.9-6, and 5.9-7 .

Without mitigation, the following impacts would be **potentially significant**

- **Impact 5.9-2:** The project site contains hazardous materials impacted soils that require further investigation, which could create a significant hazard to the public or the environment without mitigation.
- **Impact 5.9-3:** The project site is an active oil field, and the proposed project could result in hazardous emissions and handle hazardous wastes that could adversely impact Olinda Elementary School.
- **Impact 5.9-4:** The project site is located on number of hazardous materials sites that could potentially create a significant hazard to the public or the environment.

5.9.7 Mitigation Measures

Impacts 5.9-2, 5.9-3, and 5.9-4

HAZ-1 An additional Phase II Environmental Site Assessment (ESA) shall be performed at the historical sumps and the drainage channel already investigated under the Focused Phase II ESA to better define and evaluate the vertical and lateral extent of impacted soils. In addition, a Phase II ESA shall be prepared to investigate other historical sumps, oil wells, former tank areas, roads, manifolds and pipelines, and the agricultural land that were not included in the Focused Phase II ESA. Phase II ESAs shall include strategic test pits and trenching, near-surface and shallow soil testing, and drilling of deep soil borings at the areas of potential environmental concern identified in the Phase I ESA and the Focused Phase II ESA (DEIR Appendix H and Appendix I).

The additional Phase II ESA investigations shall be conducted in accordance with guidelines developed by the Department of Toxic Substances Control (DTSC) and US Environmental Protection Agency (EPA) for site assessments. The Phase II ESA investigation shall be submitted to the City of Brea Community Development Department for review and approval by an independent third-party reviewer.

HAZ-2 All cleaning, dismantling, and removal of oil field production tanks shall be conducted in compliance with permitting, sampling, monitoring, and handling requirements of the applicable regulatory oversight agency or agencies. A Phase II Environmental Site Assessment shall be conducted upon completion of tank and facility removal operations.

HAZ-3 If the Phase II Environmental Site Assessment (ESA) testing described in Mitigation Measure HAZ-1 reveals concentrations of contaminants (TPH, VOCs, SVOCs, PCBs, OCPs, OPPs, soil vapor, etc.) above acceptable health-based screening levels for residential exposure, those areas shall be defined and remediated to below the health-based level of concern, and the project applicant shall prepare a remedial action plan (RAP). The RAP shall be reviewed and approved by the appropriate oversight regulatory agencies (Orange County Health Care Agency–Environmental Health Division, Orange County Fire Authority, Regional Water Quality Control Board, etc.) prior to issuance of a grading permit for an

affected area. Remediation may include bioremediation, excavation, and disposal of impacted soil. The construction contractor shall implement the recommendations outlined in the RAP.

HAZ-4 Verification soil sampling (confirmation sampling) shall be conducted after remediation of impacted soils that exceeded the approved remedial action plan (RAP) criteria. Verification sampling shall be conducted under the direction of the regulatory oversight agency representative and shall be collected and analyzed in compliance with the approved RAP or as directed by the regulatory oversight agency.

HAZ-5 The project applicant shall retain an experienced petroleum environmental consultant to document the remediation efforts during all remediation phases, overall site grading, and implementation of the project mitigation measures in accordance with the approved remedial action plan. At completion of the site remediation, site closure reports containing environmental documentation shall be submitted to the appropriate oversight regulatory agencies for approval. A closure letter from the Orange County Health Care Agency shall be obtained to document the completion of remediation activities prior to the issuance of building permits.

HAZ-6 Prior to commencing grading operations, the project applicant shall consult with the California Department of Conservation, Geologic Energy Management Division (CalGEM), to ensure that all oil wells on the project site have been identified and are plugged and abandoned in accordance with applicable CalGEM regulations. Any oil well that has not previously been abandoned, as evidenced by the issuance of a "Report of Well Abandonment" issued by CalGEM, shall be plugged and abandoned in accordance with CalGEM regulations and shall meet all CalGEM requirements. Abandonments shall be completed prior to the commencement of grading within 50 feet of such a well.

Any previously abandoned well that is within 100 feet of a proposed structure or within a street right-of-way shall be evaluated and reabandoned, if necessary, to meet updated CalGEM standards prior to building permit approval.

HAZ-7 No habitable buildings shall be built closer than 10 feet to an abandoned wellbore.

HAZ-8 In the event that any crude oil pipelines remain in operation on the project site, they shall be relocated at least 100 feet from any building and buried beneath the ground surface or in compliance with county, state, or federal setback requirements, whichever is greater.

HAZ-9 Existing 30-inch SoCal Gas gas line shall be located within a minimum of 10 feet easement and shall not be located within any private residential lot.

HAZ-10 Prior to issuance of building permits, soils adjacent to oil wells abandoned in development areas shall be mitigated to meet residential cleanup requirements of an approved remedial action plan.

HAZ-11 Prior to issuance of any building permits, any abandoned well within 300 feet of a planned habitable structure shall be mitigated to the current guidelines of the City of Brea Fire Department. All habitable structures within 300 feet of an abandoned well shall follow methane mitigation methods approved by the City's Combustible Soil-Gas Guideline. Any mitigation measure required of habitable structures shall be reflected on any plans submitted for building permits or occupancy permits.

HAZ-12 Prior to issuance of any building permit for any Planning Area following remediation and decommission efforts on the areas of the existing oil and gas production operations, the project applicant shall prepare a combustible gas/methane assessment study by a registered professional and submit it to the City of Brea Fire Department for review and approval. The study shall meet the requirements of the City's Combustible Soil-Gas Guideline and contain a detailed description of the site investigation, including the methodology and data collection techniques used. If detectable levels of methane are encountered on the project site that exceed the Brea Fire Department standards, the project applicant shall submit a mitigation plan to the City of Brea Fire Department and implement remedial measures as directed by the City's Fire Department.

5.9.8 Level of Significance After Mitigation

Impacts 5.9-2, 5.9-3, and 5.9-4

Implementation of Mitigation Measures HAZ-1 through HAZ-4 would further define the vertical and lateral extent of impacted soils from the project site by performing soil borings at the areas of potential environmental concerns for subsequent remedial cleanup in accordance with applicable regulations from DTSC and US EPA. Preparation and implementation of remedial action plan to relocate, treat, and/or dispose of impacted soils to ensure that the project site is cleaned up to meet the applicable screening levels for residential uses. In addition, implementation of Mitigation MeasureHAZ-5 would ensure that remediation efforts during all remediation phases, overall site grading, and implementation of the project mitigation measures are performed in accordance with the approved remedial action plan by an experienced petroleum environmental consultant. Mitigation Measures HAZ-6 through HAZ-11 would ensure that the applicable remediation activities are reviewed and approved by the OCHCA, OCFA, and CalGEM at the close of the remediation activities and prior to issuance of any building permit on the areas of the existing oil and gas production. Preparation and implementation of a combustible gas/methane assessment study as required in Mitigation Measure HAZ-12 would ensure that impacts are reduced to a less than significant level. Therefore, potential impacts associated with hazardous materials would be reduced to a less than significant level, and no significant and unavoidable adverse impacts would remain.

5.9.9 References

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