

5. Environmental Analysis

5.7 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the proposed project on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations. Potential project impacts and appropriate mitigation measures or standard conditions are included as necessary. The analysis in this section is based, in part, upon the following source(s):

- *Radius Map Report, City of Hope, 1500 E. Duarte Road, Duarte, CA 91010*, Environmental Data Resources (EDR), February 29, 2016.

A complete copy of this study is included in Appendix G to this DEIR.

The following City of Hope plans and procedure manuals, available on request, are referenced in this section:

- Emergency Operations Plan, October 2014
- Safe Handling of Hazardous Medications and Waste, July 2014
- Radioactive Materials, Receiving and Handling, October 2014
- Radiation Safety Manual, 2008
- Spill Management Assistance Response Team (S.M.A.R.T.), July 2015

5.7.1 Environmental Setting

5.7.1.1 REGULATORY SETTING

Federal

Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) protects water, air, and soil resources from the risks created by past chemical disposal practices. This law is also called the Superfund Act and regulates sites on the National Priority List, which are called Superfund sites.

Emergency Planning and Community Right-to-Know Act

In 1986, Congress passed the Superfund Amendments and Reauthorization Act, Title III of which was the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The act required the establishment of state commissions, planning districts, and local committees to facilitate the preparation and implementation of emergency plans. Under the requirements, local emergency planning committees are responsible for developing a plan for preparing for and responding to a chemical emergency, including:

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

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

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

The emergency plan is reviewed by the State Emergency Response Commission and publicized throughout the community. The local emergency planning committee is required to review, test, and update the plan each year.

Another purpose of the EPCRA is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of EPCRA require businesses to report to state and local agencies the location and quantities of chemicals stored onsite. Under Section 313 of EPCRA, manufacturers are required to report chemical releases for more than 600 designated chemicals. In addition to chemical releases, regulated facilities are also required to report offsite transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and chemical recycling activities. The US Environmental Protection Agency (EPA) maintains the Toxic Release Inventory database that documents the information that regulated facilities are required to report annually.

Resource Conservation and Recovery Act

Federal hazardous waste laws are generally promulgated under RCRA. These laws provide for the “cradle to grave” regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The California Department of Toxic Substances Control is responsible for implementing the RCRA program as well as California’s own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to the County of Los Angeles for state law regulating hazardous waste producers or generators.

Hazardous Materials Transportation Act

The United States Department of Transportation (USDOT) regulates hazardous materials transportation under Title 49 (Transportation) 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.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including 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 as

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

well as 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 result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

Occupational Safety and Health in Hospitals

Guidelines for occupational safety and health of hospital workers are set forth in the Occupational Safety and Health Administration (OSHA) Technical Manual, Section VI, Chapters 1, *Hospital Investigations: Health Hazards*, and 2, *Controlling Occupational Exposure to Hazardous Drugs* (OSHA 2016). The National Institute of Occupational Safety and Health (NIOSH) issued its *Guidelines for Protecting the Safety and Health of Health Care Workers* in 1988.

Medical Waste

Several regulations govern the handling, storage, and disposal of medical waste.

- Regulations governing hospital, medical, and infectious waste incinerators are set forth in CFR Title 40, Parts 60 and 62.
- Regulations governing occupational exposure to blood-borne pathogens and administered by OSHA are set forth in CFR Title 29, Part 1910.
- The Food and Drug Administration regulates the types of containers used for storing medical wastes (CFR Title 21, Part 864).
- The packaging of medical waste for transport is regulated by USDOT (CFR Title 49, Part 173).

Radiologic Safety

Nuclear Regulatory Commission regulations, including those governing the licensing of medical uses of nuclear materials, standards for protection against radiation, and packaging and transport of radioactive material are set forth in CFR Title 10, Chapter 1.

State

Hazardous Substances Account Act

The Hazardous Substances Account Act (California Health and Safety Code Sections 25300 et seq.) authorizes the State to clean up hazardous materials release sites – including abandoned sites – not qualifying for cleanup under CERCLA; provides funds to pay for the state's share of costs of CERCLA cleanups; and provides compensation to persons injured by hazardous materials releases.

Hazardous Materials Release Notification

Many state statutes require emergency notification of a hazardous chemical release:

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- California Health and Safety Codes Sections 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

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. In addition, all releases that result in injuries or harmful exposure to workers must be immediately reported to the California Division of Occupational Safety and Health (Cal/OSHA) pursuant to the California Labor Code Section 6409.1(b).

Hazardous Materials Disclosure Programs

The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs, which include: hazardous materials release response plans and inventories (business plans), the California Accidental Release Prevention (CalARP) Program, and the Underground Storage Tank (UST) Program. The Unified Program is implemented at the local government level by CUPAs.

Hazardous Materials Business Plans

Both the federal government (Code of Federal Regulations) and the State of California (California Health and Safety Code) require all businesses that handle more than a specified amount—or “reporting quantity”—of hazardous or extremely hazardous materials to submit a hazardous materials business plan to its CUPA. The preparation, submittal, and implementation of a business plan is required by any business that handles a hazardous material or a mixture containing a hazardous material in specified quantities.

Business plans must include an inventory of the hazardous materials at the facility. Businesses must update their business plan at least every three years and the chemical portion every year. Also, business plans must 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 for immediate notification of all appropriate agencies and personnel, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all company emergency coordinators, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

California Accidental Release Prevention Program

CalARP became effective on January 1, 1997, in response to Senate Bill 1889. 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

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

this accident potential. This requirement is coupled with the requirements for preparation of hazardous materials business plans under the Unified Program, implemented by the CUPA.

Leaking Underground Storage Tanks

Leaking USTs have been recognized since the early 1980s as the primary cause of groundwater contamination from gasoline compounds and solvents. In California, regulations aimed at protecting against UST leaks have been in place since 1983 (Health and Safety Code). This occurred one year before RCRA was amended to add Subtitle I, requiring UST systems to be installed in accordance with standards that address the prevention of future leaks. The State Water Resources Control Board has been designated the lead California regulatory agency in the development of UST regulations and policy.

Older tanks are typically single-walled steel tanks. Many of these have leaked as a result of corrosion, punctures, and detached fittings. As a result, the State of California required the replacement of older tanks with new double-walled fiberglass tanks with flexible connections and monitoring systems. UST owners were given 10 years to comply with the new requirements—the deadline was December 22, 1998. However, many UST owners did not act by the deadline, so the state granted an extension for their replacement ending January 1, 2002. The State Water Resources Control Board, in cooperation with the Governor's Office of Emergency Services, maintain an inventory of leaking USTs in a statewide database.

California Code of Regulations, Title 22, Division 4.5

Title 22, Division 4.5, of the California Code of Regulations (CCR) sets forth the requirements for hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste. These regulations specify the requirements for transporting shipments of hazardous waste, including manifesting, vehicle registration, and emergency accidental discharges during transportation.

California Fire Code

The California Fire Code (CFC; CCR Title 24 Part 9) includes requirements for building materials and methods pertaining to fire safety and life safety, fire protection systems in buildings, emergency access to buildings, and handling and storage of hazardous materials. The CFC is updated triennially; the 2016 CFC is scheduled to take effect January 1, 2017.

Asbestos

Asbestos is the name of a group of silicate minerals that are heat resistant, and thus were commonly used as insulation and fire retardant. Inhaling asbestos fibers has been shown to cause lung disease (asbestosis) and lung cancer (mesothelioma) (DTSC 2016). Beginning in the early 1970s, a series of bans on the use of certain asbestos-containing materials (ACM) in construction were established by the EPA and the Consumer Product Safety Commission. Most US manufacturers voluntarily discontinued the use of asbestos in certain building products during the 1980s. California Government Code Sections 1529 and 1532.1 provide for exposure

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

limits, exposure monitoring, respiratory protection and good working practice by workers exposed to lead and ACM.

Requirements for limiting asbestos emissions from building demolition and renovation activities are also specified in South Coast Air Quality Management District (SCAQMD) Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). Numerous buildings onsite were built between 1935 and 1978 (see Section 5.4, *Cultural Resources*, of this DEIR), and thus may contain ACMs.

Lead

Lead was formerly used as an ingredient in paint (before 1978) and as a gasoline additive; both of these uses have been banned. Lead is listed as a reproductive toxin and a cancer-causing substance; it also impairs the development of the nervous system and blood cells in children (DTSC 2016). Paint containing lead at concentrations of 5,000 milligrams per kilogram (or parts per million) is considered lead-based paint (LBP). Structures built before 1978 are presumed to contain LBP. Lead must be contained during demolition activities (California Health & Safety Code Sections 17920.10 and 105255). CFR Title 29, Part 1926 establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation or monitoring.

Polychlorinated Biphenyls

A group of toxic chemicals used for a variety of purposes including electrical applications, carbonless copy paper, adhesives, hydraulic fluids, and caulking compounds. PCBs do not breakdown easily and are listed as cancer-causing agents by the California Office of Environmental Health Hazard Assessment (DTSC 2017). Regulations governing the abatement and disposal of polychlorinated biphenyls in demolition activities are set forth in the Code of Federal Regulations, Title 40, Sections 761.61 et seq.

Mercury

Mercury is used in fluorescent lamps, thermostats, electrical switches, and other applications. is highly toxic and affects the nervous system, kidneys and other organs (DTSC 2017). Mercury-containing equipment is classified as universal waste by the Department of Toxic Substances Control and the EPA (DTSC 2010).

Regulations Governing Medical Waste

Medical Waste Management Act

The Medical Waste Management Act (California Health and Safety Code Sections 117600–118360) sets forth requirements for storage, transport, treatment, and disposal of medical waste administered by the California Department of Public Health Medical Waste Management Program.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Assembly Bill 333

Assembly Bill 333 (AB 333; Chapter 564, Statutes of 2014) sets forth additional requirements for transport of medical waste.

Senate Bill 225

Senate Bill 225 (SB 225; Chapter 352, Statutes of 2015) sets forth additional requirements for containment, storage, and transport of medical waste.

California Code of Regulations Title 8, Section 5193: Blood-Borne Pathogens

Section 5193 contains regulations governing occupational exposure of blood-borne pathogens. Guidelines for avoiding and minimizing exposure to blood-borne pathogens are issued by Cal/OSHA in “Exposure Control Plan for Bloodborne Pathogens” (2001a) and “A Best Practices Approach for Reducing Bloodborne Pathogen Exposure” (2001b).

Radiologic Safety Regulations

Radiation Control Law (California Health and Safety Code Sections 114960 et seq.)

The Radiation Control Law governs sources of ionizing radiation for the protection of occupational and public health and safety. Regulations implementing the Radiation Control Law, set forth in CCR Title 17, Sections 30100 et seq., are implemented by the California Department of Public Health.

Radiologic Technology Act (California Health and Safety Code Section 27[f])

The Radiologic Technology Act governs the use of radiologic equipment in health care, including x-ray machines. Regulations implementing the Radiologic Technology Act are set forth in CCR Title 17, Sections 30400 et seq.

Regional

South Coast Air Quality Management District

SCAQMD Rule 1403 governs the demolition of buildings containing asbestos materials. Rule 1403 specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACM. The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, and storage and disposal requirements for asbestos-containing waste materials.

Los Angeles County

A CUPA is a local agency that has been certified by CalEPA to implement the local Unified Program. The CUPA can be a county, city, or joint-powers authority. A participating agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within its jurisdiction on behalf

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

of the CUPA. A designated agency is a local agency that has not been certified by CalEPA to become a CUPA but is the responsible local agency that would implement the six Unified Programs outlined above until it is certified. Currently, there are 83 CUPAs in California. The Los Angeles County Fire Department (LACFD) Health Hazardous Materials Division (HHMD) is the certified CUPA for most of Los Angeles County, including Duarte and Irwindale, and consolidates and coordinates:

- Hazardous Materials Business Plans
- California Accidental Release Prevention Program
- Underground Storage Tank (UST) Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Materials Management Plans and Hazardous Material Inventory Statements
- Aboveground Storage Tanks

The LACFD HHMD provides emergency response to hazardous materials releases.

City of Duarte

City of Duarte Municipal Code Section 19.50.030 regulates the use, handling, storage, and transport of hazardous materials with the intent of minimizing accidental or intentional release of such materials. Section 19.50.030 requires compliance with state and federal regulations governing the use, storage, manufacture, and disposal of hazardous materials.

City of Irwindale

City of Irwindale Municipal Code Section 8.20.060 regulates proper disposal of hazardous materials. The aforementioned Section prohibits the collection or transport of hazardous waste without a permit for such collection or transport issued by the Irwindale City Council. Hazardous materials are also regulated in other areas of the municipal code, including planned developments and quarry overlay zones.

5.7.1.2 CITY OF HOPE PLANS, POLICIES, AND PROCEDURES

City of Hope plans, policies, and procedures governing the use, storage, and disposal of hazardous wastes and hazardous materials include the following:

Emergency Operations Plan

The Emergency Operations Plan outlines procedures to be implemented by City of Hope staff in the event of an emergency situation. The Emergency Operations Plan sets forth roles and responsibilities of various staff and departments in responding to a variety of natural and man-made emergencies. The Emergency

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Operations Plan was designed to facilitate quick decision-making when implementing emergency procedures in response to disasters.

Safe Handling of Hazardous Medications and Waste

Policy and Procedures Manual, Safe Handling of Hazardous Medications and Waste identifies hazardous medications and sets forth procedures for the safe handling of hazardous medications and wastes. The procedures address handling, waste disposal, and spill management of hazardous medications used on the City of Hope campus.

Spill Management Assistance Response Team (S.M.A.R.T.)

The *Policy and Procedure Manual, Spill Management Assistance Response Team (S.M.A.R.T.)* sets forth procedures for containing, cleaning up, and disposing of hazardous materials spills; and requesting assistance from the City of Hope Occupational Safety and Health Department as appropriate. The policies address cleanup of chemical, biohazard, radioactive, and hazardous drug/chemo agent spills. Cleanup of small spills can be handled by all City of Hope personnel; however, Occupational Safety and Health Department staff must be contacted to clean up large chemical spills or spills of material that are poisonous if inhaled.

Receiving and Handling Radioactive Materials

City of Hope personnel involved in receiving and handling radioactive materials are trained in safe handling and documentation procedures. The *Policy and Procedure Manual, Radioactive Materials, Receiving and Handling* sets forth procedures for receiving and handling radioactive materials, and transferring such materials to users. The policies and procedures for delivery of radioactive materials ensure that the materials are delivered to the correct location and accepted by trained staff. The policies and procedures outline the steps to be taken in the event that a radioactive item is received in a damaged condition or is leaking.

Radiation Safety Manual

In compliance with their Radioactive Materials License, the City of Hope has developed a Radiation Safety Program. The Radiation Safety Program ensures that all sources of ionizing radiation are handled in accordance with the City of Hope policies and procedures and federal and state regulations. As part of the Radiation Safety Program, the *Radiation Safety Manual* was developed to outline regulations and procedures for the safe handling and use of radioactive materials and machine sources to provide radiation protection for employees, patients, and the public.

Additional information about City of Hope plans, policies, and procedures is available on request from the City of Duarte Planning Division.

5.7.1.3 EXISTING CONDITIONS

Hazardous Materials and Hazardous Wastes Used, Stored, and/or Generated Onsite

Hazardous materials and hazardous wastes used, stored, and/or generated onsite can be classified into three categories:

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

1. **Chemical hazards:** substances and wastes which are toxic, corrosive, flammable, and/or reactive.¹ Chemical hazards onsite include:
 - Chemotherapy medicines. Poisons that destroy or control cancer cells, or ease symptoms of cancer; often by inhibiting cell division
 - Other hazardous drugs. A drug with any of the four following characteristics is considered hazardous:
 - Genotoxic
 - Carcinogenic
 - Teratogenic (causes birth defects; or other disturbances of embryonic or fetal development; or halts pregnancy altogether)
 - Toxic at low doses in animals or patients (OSHA 2016)
 - Sterilants, disinfectants, and other cleaning chemicals. Widely used sterilants and disinfectants include ethylene oxide and glutaraldehyde.
 - Laboratory chemicals
 - Pesticides
 - Compressed gases such as oxygen, carbon dioxide, nitrogen, and nitrous oxide (“laughing gas”). Oxygen can cause reproductive damage and mutations (NJDHSS 2007). Carbon dioxide can cause suffocation, may increase respiration and heart rate, and can cause frostbite (Praxair 2016). Nitrogen can displace oxygen and cause rapid suffocation; liquid nitrogen can cause cryogenic burns (Praxair 2014). Nitrous oxide is an oxidizer and intensifies combustion, can cause frostbite, can displace oxygen and cause rapid suffocation, and can cause drowsiness and dizziness (Airgas 2016).
2. **Biological hazards or biohazards:** include infectious agents; biological substances transported for diagnostic or investigative purposes; and waste or reusable material derived from medical treatment.
 - Biohazardous substances include:
 - Biotherapy (immunotherapy) agents—such as monoclonal antibodies and cytokines—that augment, modulate, or restore the patient’s immune responses; directly interfere with tumor activity; or affect a tumor’s ability to replicate (McCune 2013)
 - Human tissues or organs (such as for transplantation)
 - Human blood
 - Microbiological cultures and specimens

¹ Radioactive substances can also be classified as chemical hazards but here are classified separately.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

- **Biohazardous wastes** include all of the following categories:
 - Human tissues, organs, or body parts
 - Human blood and other body fluids
 - Microbiological waste. Cultures and stocks of infectious agents and other microorganisms
 - Sharps. Hypodermic needles, syringes, pipettes, capillary tubes, and broken glass
 - Isolation wastes from patients with highly communicable diseases
 - Animal wastes—including carcasses, body parts, and bedding—that may have been exposed to infectious agents during research or testing (Hercenter.org 2016a)
3. **Radioactive Materials:** Common uses of radioactive materials onsite include materials implanted into patients; oral medications; substances injected, in relatively low doses, for diagnostic procedures; and substances used in radiation beams for diagnosis or treatment.

Medical Waste Transport and Disposal

One medical waste transfer station in the San Gabriel Valley is listed on the California Department of Public Health’s Registered Medical Waste Transfer Stations and Treatment Facilities list—Veolia ES Technical Solutions, LLC, in the City of Azusa (CDPH 2016).

Environmental Database Search

An environmental database search was conducted on February 29, 2016, by Environmental Data Resources, Inc. (see Appendix G). Findings of the database search of listings within one-quarter mile of City of Hope are summarized in Table 5.7-1. A one-quarter mile radius is a standard search distance for environmental database searches that reasonably captures all potentially hazardous sites near a project site.

Table 5.7-1 Environmental Database Listings Within 0.25 Mile of City of Hope

Site and Address	Database, Reason for Listing, Regulatory Status
Onsite Listings	
City of Hope Gonda Expansion	NPDES (National Pollution Discharge Elimination System): water quality permits including stormwater permits
City of Hope	LQG: Large Quantity Generator of hazardous wastes on federal Resource Conservation and Recovery Act (RCRA) database
	UST: Permitted Underground Storage Tank
	SWEEPS UST (Statewide Environmental Evaluation and Planning System): historical USTs (5 tanks)
	HIST UST (Historical UST) (5 tanks)
	CA FID (Facility Inventory Database): Historical USTs
	US AIRS (Aerometric Information Retrieval System): compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies.
	EMI: Emissions Inventory Data: Toxic and criteria pollutant emissions data.
	HMS: Los Angeles County Department of Public Works database of Industrial waste and underground storage tank sites
	NPDES

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Table 5.7-1 Environmental Database Listings Within 0.25 Mile of City of Hope

Site and Address	Database, Reason for Listing, Regulatory Status
	CHMIRS (2 listings): 1990: gasoline was released from an overturned vehicle after a collision 1991: a suspicious fire/explosion occurred in industrial equipment surrounded by a vacant lot ECHO: Enforcement and Compliance History Information (2 listings): one for City of Hope; 2nd for Southern California Edison Hopeful Substation onsite Haznet: Hazardous waste shipment manifests. 644 listings through 2014.
Offsite Listings	
Airgas West-Duarte 2250 Buena Vista Street Next to west site boundary	ICIS: Integrated Compliance Information System: national enforcement and compliance program ECHO Haznet: 17 shipments
Airco Duarte 2250 Buena Vista Street Next to west site boundary	SWEEPS UST: 1 tank
Circle R Investments 2250 Buena Vista Street Next to west site boundary	HMS
RBC Southwest Products 2240 Buena Vista St Next to west site boundary	Haznet: 95 shipments
Manuel Perez 1950 Cinco Robles Rd Next to west site boundary	PEST LIC: Pesticide Regulation Licenses issued by State Department of Pesticide Regulation
Southwest Productions Co. 2240 Buena Vista St Next to west site boundary	SQG (Small Quantity Generator of hazardous wastes, on RCRA database) EnviroStor: Sites with known contamination or reason for further investigation Voluntary Cleanup site. Release of benzene affected soil. Case closed ("No Further Action") 1998. LUST: Leaking Underground Storage Tank Release of Waste Oil / Motor / Hydraulic / Lubricating oil affected soil Case closed 1994 HIST UST: 2 tanks EMI HIST CORTESE: Historic database: underground storage tanks, solid waste facilities, and cleanup sites. LA Co. Site Mitigation: County Community Health Services database ECHO SWEEPS UST (2 tanks) HMS
Los Angeles County Sanitation District 2144 Buena Vista St Next to west site boundary	Haznet: 36 shipments
Allen Villa Service 1816 E Village Rd Next to west site boundary	Historical auto station
Forthun John 2060 E Village Rd Next to west site boundary	Historical cleaners

5. Environmental Analysis
HAZARDS AND HAZARDOUS MATERIALS

Table 5.7-1 Environmental Database Listings Within 0.25 Mile of City of Hope

Site and Address	Database, Reason for Listing, Regulatory Status
Wing G A 2084 E Village Rd Next to west site boundary	Historical auto station
Scott G N 2090 E Village Rd Next to west site boundary	-
Irwindale Iron & Metal 2401 Buena Vista Ave 140 feet south-southwest	SWEEPS UST: historic UST: 1 tank
Fifteen Cent Wash 1314 Duarte Rd 490 feet north-northwest	Historical cleaners
Vogue Dry Cleaners 1312 E Duarte Rd 490 feet north-northwest	Historical cleaners
Warren's Richfield Service Station 1300 Duarte Rd 680 feet north-northwest	Historical auto station
Tropicana Service Station 1300 Duarte Rd 680 feet north-northwest	Historical USTs (SWEEPS UST; CA FID UST; HMS)
Chevron 9-4104 1815 Buena Vista St 710 feet north-northwest	LUST: release of Waste Oil / Motor / Hydraulic / Lubricating oil affected soil Case closed 1990 Historical USTs (Hist Cortese; SWEEPS UST; Hist UST; 4 tanks)
Davis Geo M Chevron Service 1815 Buena Vista St 710 feet north-northwest	Historical auto station
Woodward HRT 1700 Business Center Dr 730 feet northeast	SQG TRIS: Toxics Release Inventory System ECHO
1700 Business Center Dr 730 feet northeast	AST: Aboveground storage tank
Former GE Aviation Systems 1700 Business Center Dr 730 feet northeast	EnviroStor: Voluntary cleanup program. Release of diesel, motor oil, and/or tributyl phosphate affected soil; case closed (<i>No Further Action</i>) 2014. NPDES
Smiths Aerospace Actuation 1700 Business Center Dr 730 feet northeast	Historical USTs (SWEEPS UST; CA FID UST) Haznet: 35 shipments WDS: Waste Discharge System WIP: Well Investigation Program Case in the San Gabriel and San Fernando valleys
Pioneer Electronics 1801 S Highland Ave 790 feet northeast	Historical USTs (SWEEPS UST; CA FID UST; HMS): 3 tanks

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Table 5.7-1 Environmental Database Listings Within 0.25 Mile of City of Hope

Site and Address	Database, Reason for Listing, Regulatory Status
Holmes Body Shop Inc 1801 Highland Ave 790 feet northeast	SQG
	HMS
	ECHO
Pacific Scientific Htl/Kin-Tech Div 1800 Highland Ave 830 feet northeast	SQG
	TRIS
	ECHO
	Hist UST
	EMI
	Haznet: 3 shipments, 2013
	NPDES
	WDS
	WIP
Cooks Collision of Duarte 1718 Highland Ave 930 feet northeast	SQG
	HMS
	ECHO
Golden State Hydraulics 1718 Highland Ave Unit A	SQG
	WIP
	ECHO
1718 Highland Ave 930 feet northeast	Historical auto station
Glasteel Industrial Laminates 1727 Buena Vista 940 feet north-northwest	Hist UST; SWEEPS UST; CA FID UST: 2 tanks
	EMI
Glasteel Tennessee Inc. 1727 Buena Vista 940 feet north-northwest	SQG
	HMS
	ECHO
Fibrwrap Construction Inc. 1710 Evergreen Street 1,050 feet north-northeast	CESQG: Conditionally Exempt Small Quantity Generator of hazardous wastes
1512 Highland Ave 1,090 feet northeast	Historical cleaners
Mead Wrecking Co. #313 1215 Duarte Road 1,250 feet north-northwest	LOS ANGELES CO. LF: Los Angeles County Landfill WMUDS/SWAT: Waste Management Unit Database/Solid Waste Assessment Test
Sari Art and Printing 1803 Business Center Dr 1,320 feet northeast	SQG
	Haznet: 5 shipments
	ECHO

Note: Addresses are omitted for onsite listings. All sites in Duarte except as specified.

Schools within 0.25 Mile of the Project Site

One school is within 0.25 mile of the project site, Beardslee Elementary School at 1212 Kellwil Way in Duarte, about 600 feet to the west.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Regional Groundwater Contamination

The San Gabriel Valley Area 2 (“Baldwin Park”) Superfund Site is across the I-605 freeway from the project site. The Superfund site, approximately 17.5 square miles, is part of the Main San Gabriel Valley Groundwater Basin underlying portions of the cities of Irwindale, Azusa, Baldwin Park, and West Covina. The groundwater plume does not underlie the project site. The Superfund site addresses multiple, commingled plumes of groundwater contamination that are over a mile in width and eight miles in length. The depth to the groundwater varies from about 150 to 350 feet, and the groundwater contamination extends from the water table to more than 1,000 feet below ground surface. The most prevalent contaminants in the groundwater are trichloroethene (TCE), perchloroethylene (PCE), carbon tetrachloride, perchlorate, and N-nitrosodimethylamine (NDMA). Remediation is underway through several treatment facilities using a variety of treatment processes (Geosyntec 2016; MSGBW 2016).

Wildfire Hazard

The Santa Fe Flood Control Basin, next to the southeast site boundary, is designated a Very High Fire Hazard Severity Zone by the California Department of Forestry and Fire Prevention (CAL FIRE 2012).

5.7.2 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 for people residing or working in the project area.
- H-6 For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- H-7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

H-8 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to the urbanized areas or where residences are intermixed with wildlands.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold H-5: The project site is not in an airport land use plan, or within two miles of a public-use airport.
- Threshold H-6: There are no private airstrips near the project site.

These impacts will not be addressed in the following analysis.

5.7.3 Environmental Impacts

Methodology

This analysis evaluates the potential impacts of the proposed project on human health and the environment due to potential exposure of hazardous materials or conditions associated with the project site, project construction, and project operations. Numerous databases were searched as identified in Table 5.7-1 to determine the existing conditions of the site. The proposed project's operations and procedures were evaluated in the context of the on-site and surrounding environmental conditions to determine the project's potential hazard risks.

The following impact analysis addresses thresholds of significance for potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.7-1: Project construction and operations would involve the transport, use, and/or disposal of hazardous materials. [Thresholds H-1, H-2, and H-3]

Impact Analysis:

Construction

Construction in accordance with the Campus Plan would involve demolition, grading, and construction of new buildings. Potentially hazardous materials used during construction include substances such as paints, sealants, solvents, adhesives, cleaners, and diesel fuel. There is potential for these materials to spill or to create hazardous conditions. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature. Project construction workers would be trained in safe handling and hazardous materials use.

To prevent hazardous conditions, existing local, state, and federal laws—such as those listed under Section 5.7.1.1, *Regulatory Framework*—are to be enforced at the construction sites. For example, compliance with existing regulations would ensure that construction workers and the general public are not exposed to any

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

risks related to hazardous materials during demolition and construction activities. Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility.

Furthermore, strict adherence to all emergency response plan requirements set forth by the cities of Duarte and Irwindale and LACFD would be required throughout the duration of project construction. While construction activities would be near and in the vicinity of existing sensitive uses, including existing City of Hope buildings and Beardslee Elementary School, upon compliance with federal, state, and city regulations, construction activities in accordance with the proposed project would result in a less than significant impact on the public or environment through the use, transport, or disposal of hazardous materials. Therefore, hazards to the public or the environment arising from the routine use of hazardous materials during project construction would be less than significant.

Grading Activities

Grading activities of the development that would be allowed by the Campus Plan would involve the disturbance of onsite soils. Soils on certain parcels of the project area could be contaminated with hazardous materials due to current and historical operations. The transport of these materials and exposure to contaminated soils of workers and the surrounding environment could result in a significant impact. Any contaminated soils encountered on development sites in the Campus Plan area would be required to be removed prior to grading activities and disposed of offsite in accordance with all applicable regulatory guidelines. This is a potentially significant impact.

Demolition

Demolition of buildings has the potential to expose and disturb LBP, ACMs, PCBs, and mercury. Demolition can cause encapsulated ACMs (if present) to become friable and, once airborne, they are considered a carcinogen.² Demolition of the existing buildings and structures can also release of lead into the air if LPB is not properly removed and handled. The EPA has classified lead and inorganic lead compounds as “probable human carcinogens” (USEPA 2015). Such releases could pose significant risks to persons living and working in and around project site, as well as to project construction workers.

Abatement of all hazardous materials encountered during any future building demolition would be required to be conducted in accordance with all applicable laws and regulations, including those of the EPA (which regulates disposal), OSHA, US Department of Housing and Urban Development, Cal/OSHA (which regulates employee exposure), and SCAQMD. Lead hazards in Duarte and Irwindale are assessed and abated as necessary in accordance with several state laws and regulations. Asbestos hazards are assessed and abated

² When dry, an ACM is considered friable if it can be crumbled, pulverized, or reduced to powder by hand pressure. If it cannot, it is considered a nonfriable ACM. It is possible for nonfriable ACMs to become friable when subjected to unusual conditions, such as when demolishing a building or removing an ACM that has been glued into place.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

as necessary in accordance with CCR Title 8, Section 1529. Mercury-containing equipment and PCBs would be disposed of as universal waste in accordance with CCR Title 22, Section 66261.9. Future projects would be required to abate and dispose of PCBs in accordance with Code of Federal Regulations, Title 40, Sections 761.61 et seq.

The EPA requires that all asbestos work performed within regulated areas be supervised by a competent person who is trained as an asbestos supervisor (EPA Asbestos Hazard Emergency Response Act, 40 CFR 763). SCAQMD's Rule 1403 requires that buildings undergoing demolition or renovation be surveyed for ACMs prior to any demolition or renovation activities. Should ACMs be identified, Rule 1403 requires that ACMs be safely removed and disposed of at a regulated site, if possible. If it is not possible to safely remove ACMs, Rule 1403 requires that safe procedures be used to demolish the building with asbestos in place without resulting in a significant release of asbestos. Additionally, during demolition, grading, and excavation, all construction workers would be required to comply with the requirements of CCR Title 8, Section 1529 (Asbestos), which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos.

Cal/OSHA regulates the demolition, renovation, or construction of buildings involving lead-based materials. It includes requirements for the safe removal and disposal of lead, and the safe demolition of buildings containing LBP or other lead materials. Additionally, during demolition, grading, and excavation, all construction workers would be required to comply with the requirements of CCR Title 8, Section 1532.1 (Lead), which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead.

The potential exposure of construction workers to ACMs, LBP, PCBs, or mercury is a potentially significant impact. Survey of existing structures prior to demolition would be required to characterize the potential exposure and further prevent impacts from the potential release of these materials.

Operation

Project buildout would increase building area of patient care and research land uses combined by approximately a net 870,000 square feet, thus increasing the amounts of hazardous materials that would be used in City of Hope patient care and research functions. The City of Hope uses and has specific protocols (discussed in Section 5.7.1.2 of this DEIR) for the use of chemical hazards, biohazards, and radioactive materials.

Chemical Hazards

Operation of the proposed facilities would involve use of hazardous chemicals such as chemotherapy medicines, sterilants, disinfectants, laboratory chemicals, pesticides, and compressed gases; and would generate wastes containing such chemicals. Hazardous chemicals would be used and disposed of in compliance with existing regulations and guidelines of OSHA, Cal/OSHA, NIOSH, USDOT, the EPA, California Department of Public Health, and LACFD. City of Hope policies and procedures for the safe use, storage and disposal of hazardous chemicals are set forth in its "Policy and Procedures Manual, Safe Handling of Hazardous Materials and Waste." City of Hope staff are properly trained in these regulations,

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

guidelines, and procedures that govern the safe handling, transport, and disposal of hazardous chemical. When used and disposed of correctly and in compliance with existing laws and regulations, hazardous chemicals would not result in a significant hazard to employees, patients, or visitors.

Biohazards

Operation of the proposed facilities would involve use of biohazardous substances such as biotherapy agents, human tissues or organs, human blood, and microbiological cultures and specimens. Project operation would also generate all six categories of biohazardous wastes listed above (human tissues, organs, or body parts; human blood and other body fluids; microbiological waste; sharps; isolation waste; and animal wastes). Therefore, project operation could pose hazards to City of Hope workers, patients, and visitors. The use of biohazardous substances and the storage and transport of biohazardous wastes would be conducted in compliance with existing regulations and guidelines, including the Medical Waste Management Act, AB 333, SB 225, CCR Title 8 Section 5193, and OSHA and NIOSH guidelines. City of Hope policies and procedures for the safe use, storage, and disposal of biohazards are set forth in its “Policy and Procedures Manual, Safe Handling of Hazardous Materials and Waste.” City of Hope staff are properly trained in these regulations, guidelines, and procedures that govern the safe handling, transport, and disposal of biohazardous substances. When used and disposed of correctly and in compliance with existing laws and regulations, biohazardous substances would not result in a significant hazard to employees, patients, or visitors.

Radioactive Materials

Operation of the proposed facilities would involve increased use of radioactive materials in diagnosis and treatment. Thus, project operation could pose radiologic hazards to City of Hope workers, patients, and visitors. Radioactive materials would be used, stored, transported, and disposed of in compliance with CFR Title 10, Chapter 1; the Radiation Control Law; the Radiologic Technology Act; and regulations implementing the latter two laws. City of Hope policies and procedures for the safe use of radiologic equipment and the safe handling, use, and storage of radiologic materials are set forth in its “Radiation Safety Manual and Policy and Procedure Manual, Receiving and Handling Radioactive Materials.” and implemented as part of their Radiation Safety Program. Use of radioactive materials and radiological machines are supervised and conducted by City of Hope staff that have been properly trained in the policies and procedures for the safe use of radiation. These policies and procedures are in place to provide radiation protection to employees, patients, and the public and to ensure that radiation exposure standards are not exceeded. In addition, radioactive material deliveries are only received by qualified staff who are trained in the proper handling and storage of these materials. When handled, used, and disposed of correctly and in compliance with existing laws and regulations, radioactive materials would not result in a significant hazard to employees, patients, or visitors.

Summary

Regarding all three categories of hazardous materials addressed above, if new types of equipment involving use of hazardous materials or use of new categories of hazardous materials were introduced into City of

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Hope, the policy and procedure manuals would be updated to ensure the safe handling, storage, transport, and disposal of hazardous materials.

Accidental Release of Hazardous Materials

The use, storage, and transport of hazardous materials and hazardous wastes in compliance with the laws and regulations mentioned above would minimize the potential for releases of hazardous materials that could pose substantial hazards to the public or the environment and would entail prompt containment and cleanup of spills, either by City of Hope staff or by emergency response agencies.

City of Hope policies and procedures for containing and cleaning up spills of hazardous materials and for protecting the health and safety of workers, patients, and the public in response to a hazardous materials release are set forth in City of Hope’s “Policy and Procedure Manual, Spill Management Assistance Response Team (S.M.A.R.T.),” “Policy and Procedure Manual, Safe Handling of Hazardous Materials and Waste,” and in the Emergency Operations Plan. In the event of a spill, City of Hope staff would implement the emergency response procedures outlined in these plans to ensure that the spill is promptly contained, cleaned up, and disposed of by appropriately trained staff. When spills are contained, cleaned up, and disposed of in compliance with City of Hope policies, procedures, and emergency operations plans, impacts from the accidental release of hazardous materials would be less than significant.

Hazards to Persons at Beardslee Elementary School

Project buildout would result in increased usage and storage of hazardous materials onsite and increased transportation of hazardous materials to and from the site. Thus, project operation could subject people on and near the site, including at Beardslee Elementary School, to increased hazards from hazardous materials. However, as discussed above, City of Hope already has extensive policies, programs, and procedures in place to ensure the safe handling of hazardous materials. Compliance with these regulations and guidelines would reduce hazards from hazardous materials to the public and the environment to less than significant levels.

Impact 5.7-2: The project site is on a list of hazardous materials sites. [Threshold H-4]

Impact Analysis: The EDR report searched the following databases to identify whether the project area was listed in any hazardous materials sites databases: NPL, CERCLIS, CERCLIS-NFRAP, Federal ERNS, RCRA Non-CORRACTS TSD Facilities, RCRA CORRACTS TSD Facilities, RCRA Generators, State Sites and State Spill Sites, Cortese List, Registered USTs, or SWF/LF. A listing of the facilities identified by state regulatory agencies within the project site and surrounding area is presented in Table 5.7-1. A complete listing of all the facilities identified is included in the EDR report in Appendix G.

City of Hope is listed on several environmental databases, as shown above in Table 5.7-1. There are two listings of documented hazardous materials releases onsite—California Hazardous Materials Incident Reporting System (CHMIRS) records for two incidents, one incident in 1990 and a second in 1991. All

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

corrective action was taken in response to both of these incidents.³— Other types of hazardous material site listings onsite include a stormwater permit, large quantity generator, existing and historical underground storage tanks, and several hazardous waste shipment manifests (644). RCRA Large Quantity Generators store and generate hazardous materials. New development could expose workers or other users to hazardous materials.

Due to the fact that there are a number of listings in hazardous materials databases for the project site, there is the potential that future development activities could expose persons and the environment to hazardous substance contamination. Development projects that would be allowed under the Campus Plan could impact areas of hazardous substance contamination existing or remaining from historical operations. Impacting these areas may also pose a significant health risk to existing and future residents and/or workers. This is considered a potentially significant impact.

Impact 5.7-3: Implementation of the Campus Plan would not interfere with an adopted emergency response plan or emergency evacuation plan. [Threshold H-7]

Impact Analysis: Future development would not interfere with any evacuation plan or operations of the LACFD. Immediate access to the project area is provided by the I-210, I-605, Duarte Road, and Huntington Road. Emergency response and evacuation for Duarte and Irwindale are based on numerous access routes and freeways. The Campus Plan would not interfere with an emergency response plans or impede roadway access through removal of any streets. All construction activities would be required to be performed per the cities' and LACFD's standards and regulations. For example, future development would be required to provide the necessary on- and offsite access and circulation for emergency vehicles and services during the construction and operation phases.

Implementation of the Campus Plan would improve circulation and access within the project site. Project development would include an expanded internal loop road and other roadways, pedestrian pathways, and sidewalk improvements. Thus, project buildout would have some favorable impact on emergency access within the City of Hope campus. Additionally, City of Hope has an Emergency Operations Plan designed to facilitate quick decision-making when implementing emergency procedures in response to an internal or external disaster. Compliance with the Emergency Operations Plan on the campus would be consistent with and help facilities the Cities emergency response or evacuation procedures. Impacts on emergency access to surrounding land uses would be less than significant.

Impact 5.7-4: A designated fire hazard zone in the Santa Fe Flood Control Basin abuts the southeast site boundary. Project buildout would not expose people or structures to substantial wildfire hazards. [Threshold H-8]

Impact Analysis: The Santa Fe Flood Control Basin, next to the southeast site boundary, is designated a Very High Fire Hazard Severity Zone by the California Department of Forestry and Fire Prevention (CAL

³ In 1990 gasoline was released from an overturned vehicle after a collision. In 1991 a suspicious fire/explosion occurred in industrial equipment surrounded by a vacant lot. Five responders were decontaminated but no injuries were reported (OES 2017).

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

FIRE 2012. The project site does not contain wildland vegetation that be fuel for a wildfire. Infill development on the existing developed campus would not result in greater impacts related to wildfire hazard.

The LACFD provides fire protection and emergency medical services to the cities of Duarte and Irwindale, including the City of Hope campus. The City of Hope campus is in the first-in service area of Fire Station 44 at 1105 Highland Avenue in Duarte, about 0.6 mile to the northeast. The next two closest fire stations to the project site are Station 48 at 15546 Arrow Highway in Irwindale, about 4.2 miles by road to the southeast, and Station 169 at 5112 Peck Road in El Monte, approximately four miles by road to the southwest (Johnson 2016). The LACFD anticipates that it can serve the project with existing firefighting stations, apparatus, and staff, and that project development would not require the LACFD to build new or expanded fire stations or obtain additional apparatus and staff (Johnson 2016).

Future projects proposed on the project site would be reviewed and plan checked by the LACFD to ensure fire-safe building designs, adequate fire flow and access. Future development under the proposed project would not pose wildfire-related hazards to people or structures. Project buildout would not exacerbate an existing wildfire hazard, and impacts would be less than significant.

5.7.4 Cumulative Impacts

The area considered for cumulative impacts is the service area of LACFD HHMD's East County office, which spans the San Gabriel Valley, part of the easternmost San Fernando Valley, and part of the San Gabriel Mountains. Hazards and hazardous waste impacts are typically unique to each site and do not usually contribute to cumulative impacts. Cumulative development projects would be required to assess potential hazardous materials impacts on the development site prior to grading. The project and other cumulative projects would be required to comply with laws and regulations governing hazardous materials and hazardous wastes used and generated as described above in Section 5.7-1. Therefore, cumulative impacts related to hazards and hazardous materials would be less than significant after regulatory compliance.

Cumulative projects could propose structures for human occupancy in fire hazard severity zones. However, the design and construction of any structures developed in such zones would be required to comply with California Building Code Chapter 7A, Materials and Construction Methods for Exterior Wildfire Exposure, and CFC Chapter 49, Requirements for Wildland-Urban Interface Fire Areas.⁴ Persons responsible for such structures would also be required to remove flammable vegetation surrounding the structures pursuant to California Public Resources Code, Sections 4291 et seq., as well as requirements in CFC Chapter 49. Furthermore, the project is not proximate to a high fire hazard severity zone with significant wildland fuels (e.g. heavy vegetation) and would not contribute to cumulative fire hazard impacts. Therefore, cumulative impacts related to fire hazards would be less than significant.

⁴ The California Building Code (CBC) is CCR Title 24, Part 2. The CBC and CFC are updated on a three-year cycle; the 2016 codes are scheduled to take effect January 1, 2017.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

5.7.5 Existing Regulations

This analysis assumes compliance with all applicable laws. The following codes, rules, and regulations pertain to hazards and hazardous materials and were described in detail in Sections 5.7.1.1 of this DEIR and are listed below

Federal

Hazardous Materials Regulation: General

- United States Code Title 42 Sections 9601 et seq.: Comprehensive Environmental Response, Compensation and Liability Act and Superfund Amendments and Reauthorization Act
- United States Code Title 42, Sections 6901 et seq.: Resource Conservation and Recovery Act
- United States Code Title 42 Sections 11001 et seq: Emergency Planning & Community Right to Know Act
- United States Code Title 49 Sections 5101 et seq.: Hazardous Materials Transportation Act
- Code of Federal Regulations Title 40 Sections 761.62 et seq.: Polychlorinated biphenyls abatement and disposal

Hazardous Materials Regulation: Hospitals and Health Care

- Code of Federal Regulations Title 40 Parts 60 and 62: hospital and medical waste incinerators
- CFR Title 29 Part 1910: Occupational exposure to blood-borne pathogens
- CFR Title 10 Chapter 1: Radiologic safety and licensing
- CFR Title 49 Part 173: Packaging of medical waste for transport
- CFR Title 21 Part 864: Regulations governing the types of containers used for storing medical wastes
- Occupational Safety and Health Administration
 - Technical Manual
 - Section VI Chapter 1, Hospital Investigations: Health Hazards
 - Section VI Chapter 2, Controlling Occupational Exposure to Hazardous Drugs
- National Institute of Occupational Safety and Health
 - Guidelines for Protecting the Safety and Health of Health Care Workers

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

State

Hazardous Materials Regulation: General

- California Health and Safety Code Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory)
- California Health and Safety Code Chapter 6.8: Hazardous Substances Account Act
- California Code of Regulations, Title 19, Section 2729: Business Emergency Plans
- California Building Code (CCR Title 24, Part 2)
- California Fire Code (CCR Title 24, Part 9)
- CCR Title 8, Section 1529: Worker Safety Standards (Asbestos)
- CCR Title 8, Section 1532.1: Lead

Hazardous Materials Regulation: Hospitals and Health Care

- California Health and Safety Code Sections 117600–118360: Medical Waste Management Act
- Assembly Bill 333 [2014]: Medical waste transport
- Senate Bill 225 [2015]: Containment, storage, and transport of medical waste
- CCR Title 8, Section 5193: Blood-Borne Pathogens
- California Health and Safety Code, Sections 114960 et seq.: Radiation Control Law
- California Health and Safety Code, Section 27[f]: Radiologic Technology Act

Wildfire Hazards

- CCR Title 24, Part 2 (California Building Code), Chapter 7A: Materials and Construction Methods for Exterior Wildfire Exposure
- CCR Title 24, Part 9 (California Fire Code), Chapter 49: Requirements for Wildland-Urban Interface Fire Areas
- California Public Resources Code, Sections 4291 et seq.: Defensible Space

Regional

- South Coast Air Quality Management District Rule 1403: Asbestos
- LACFD: Certified Unified Program Agency

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

- Hazardous Materials Business Plans
- California Accidental Release Prevention Program
- Underground Storage Tank (UST) Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Materials Management Plans and Hazardous Material Inventory Statements
- Aboveground Storage Tanks
- Emergency Response for Hazardous Materials Releases

Local

- Duarte Municipal Code, Section 19.50.030: Use, storage, and transport of hazardous materials
- Irwindale Municipal Code, Section 8.20.060: Disposal of hazardous materials.

5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, some impacts would be less than significant: 5.7-3 and 5.7-4.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.7-1** Project construction and operations would involve the transport, use, and/or disposal of hazardous materials.
- **Impact 5.7-2** The project site is included on a list of hazardous materials sites.

5.7.7 Mitigation Measures

Impact 5.7-1

HAZ-1 Prior to the initiating any ground-disturbing activities pursuant to the Campus Plan, the project applicant shall prepare and submit a Phase I Environmental Site Assessment (ESA) for the entire Campus Plan area to the City of Duarte and City of Irwindale, to assess the existing environmental conditions of the Campus Plan area and evaluate the potential for contamination to be present. The Phase I ESA shall be prepared by an Environmental Professional in accordance with the American Society for Testing and Materials (ASTM) Standard E 1527.13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." Prior to issuance of a grading permit or building permit for new construction in the Campus Plan area, an Environmental Professional shall

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

review the relevant portions of the site-wide Phase I ESA and may visit the individual development site to evaluate whether any recognized environmental conditions (RECs) related to soils or groundwater identified in the Phase I ESA are present at the site. If no RECs are identified for that individual development site, no further assessment or remediation shall be required. If RECs are identified for that individual development site, the project applicant shall take additional action, which shall include either (i) a Phase II subsurface investigation for that site, or (ii) localized soil removal/remediation activities in accordance with all applicable regulatory requirements. If a Phase II subsurface investigation is conducted, soil, soil gas, and/or groundwater sampling shall be performed. If contamination is confirmed at concentrations exceeding applicable regulatory thresholds, the project applicant shall perform a screening level risk assessment to evaluate if remedial actions are necessary. The project applicant will also consider the need to consult with the appropriate regulatory agency (e.g., California Department of Toxic Substances Control, Regional Water Quality Control Board, Los Angeles County Fire Department, etc.). All contaminated soils and/or material encountered that is confirmed by sampling to be hazardous under California or federal law shall be disposed of appropriately at a regulated site and in accordance with applicable laws and regulations prior to the completion of grading. The Phase I ESA conducted pursuant to this Mitigation Measure also shall include an assessment of the possible existence of lead-based paint and asbestos-containing materials in the Campus Plan area. Each individual development site that involves demolition activities shall include an inspection for lead-based paint conducted by a licensed or certified lead inspector/assessor and a survey for asbestos-containing materials conducted by a California Certified Asbestos Consultant. Prior to the issuance of a grading permit or a building permits, a report documenting the completion, results, and follow-up remediation on the recommendations, if any, shall be provided to the City of Duarte Community Development Director and/or City of Irwindale Community Development Director, as appropriate, evidencing that all site remediation activities have been completed.

Impact 5.7-2

Mitigation Measure HAZ-1 applies.

5.7.8 Level of Significance After Mitigation

Impact 5.7-1

Implementation of Mitigation Measure HAZ-1 would ensure the completion of Phase I Environmental Site Assessment and that any recognized environmental conditions identified in such site assessments were assessed and remedied as needed in accordance with regulations. Thus, Impact 5.7-1 would be less than significant after implementation of Mitigation Measure HAZ-1.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Impact 5.7-2

Implementation of Mitigation Measure HAZ-1 would ensure the completion of Phase I Environmental Site Assessment and that any recognized environmental conditions identified in such site assessments were assessed and remedied as needed in accordance with regulations. Thus, Impact 5.7-2 would be less than significant after implementation of Mitigation Measure HAZ-1.

5.7.9 References

- Airgas. 2016, February 11. Safety Data Sheet: Nitrous Oxide. <https://www.airgas.com/msds/001042.pdf>.
- ASTM International. 2013. ASTM E-1527-13: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. <https://www.astm.org/Standards/E1527.htm>.
- California Department of Forestry and Fire Prevention (CAL FIRE). 2012, May. Very High Fire Hazard Severity Zones in LRA: Los Angeles County. http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles.php.
- California Department of Public Health (CDPH). 2016, November 1. *Registered Medical Waste Transfer Stations and Treatment Facilities*. <https://www.cdph.ca.gov/certlic/medicalwaste/Documents/MedicalWaste/2013/Treatment%20Facilities%20Transfer%20Stations.pdf>.
- California Division of Occupational Safety and Health (Cal/OSHA). 2001a. "Exposure Control Plan for Bloodborne Pathogens." Developed by the Education Unit, Cal/OSHA Consultation Service, California Department of Industrial Relations. http://www.dir.ca.gov/dosh/dosh_publications/expplan2.pdf.
- . 2001b. "A Best Practices Approach for Reducing Bloodborne Pathogen Exposure." Developed by the Education Unit, Cal/OSHA Consultation Service, California Department of Industrial Relations. http://www.dir.ca.gov/dosh/dosh_publications/BBPBest1.pdf.
- City of Hope. 2008. Radiation Safety Manual.
- . 2014a, July. Safe Handling of Hazardous Medications and Waste.
- . 2014b, October. Emergency Operations Plan.
- . 2014c, October. Radioactive Materials, Receiving and Handling.
- . 2015, July. Spill Management Assistance Response Team (S.M.A.R.T.).
- Department of Toxic Substances Control (DTSC). 2016, December 15. Glossary of Environmental Terms. http://www.dtsc.ca.gov/InformationResources/Glossary_of_Environmental_Terms.cfm.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- Environmental Data Resources (EDR). 2016, February 29. Radius Map Report, City of Hope, 1500 E. Duarte Road, Duarte, CA 91010.
- Geosyntec Consultants. 2016, May 27. *2015 Annual Performance Evaluation Report*. Volume 1: Baldwin Park Operable Unit of the San Gabriel Valley Superfund Sites, Los Angeles County, California. [https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/f8d651c17285544f88257ffb005e941c/\\$FILE/Final%202015%20BPOU%20Annual%20PE%20Report%20Vol%201_text%20&%20tables_052716.pdf](https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/f8d651c17285544f88257ffb005e941c/$FILE/Final%202015%20BPOU%20Annual%20PE%20Report%20Vol%201_text%20&%20tables_052716.pdf).
- Healthcare Environmental Resource Center (hercenter.org). 2016a, November 2. Types of Regulated Medical Waste (RMW). <http://www.hercenter.org/rmw/rmwtypes.cfm>.
- . 2016b, November 2. Common Hazardous Materials in Healthcare Facilities. <http://www.hercenter.org/hazmat/hazcommon.cfm>.
- Johnson, Kevin (Acting Chief). 2016, September 9. Written response to service questionnaire. Los Angeles County Fire Department Forestry Division.
- Main San Gabriel Basin Watermaster (MSGBW). 2016, November. Five-Year Water Quality and Supply Plan, 2016-17 to 2010-21. http://media.wix.com/ugd/af1ff8_8f7f9eace4184cf780c0f6b7b0bb1b10.pdf.
- McCune, Robin, RN. 2013, May 30. Biotherapy Update. Association of Pediatric Hematology/Oncology Nurses (APHON). <http://www.aphon.org/files/public/renewalpacketcontent.pdf>.
- New Jersey Department of Health and Senior Services (NJDHSS). 2007, April. Hazard Substance Fact Sheet: Oxygen. <http://nj.gov/health/eoh/rtkweb/documents/fs/1448.pdf>.
- Occupational Safety and Health Administration (OSHA). 2016, November 3. "Health Care Facilities." Section VI of *OSHA Technical Manual*. US Department of Labor. See https://www.osha.gov/dts/osta/otm/otm_toc.html.
- Office of Emergency Services (OES). 2017, March 6. California Hazardous Materials Incident Reports.
- Praxair. 2014, October 3. Nitrogen, Refrigerated Liquid. Safety Data Sheet P-4630. <http://www.praxair.com/-/media/documents/sds/nitrogen/liquid-nitrogen-medipure-gas-n2-safety-data-sheet-sds-p4630.pdf?la=en>.
- . 2016, July 19. Carbon Dioxide Safety. Data Sheet P-4574. <http://www.praxair.com/-/media/documents/sds/carbon-dioxide/carbon-dioxide-medipure-co2-safety-data-sheet-sds-p4574.pdf?la=en>.
- Water Systems Consulting, Inc. (WSC). 2016, June 30. Final 2015 Urban Water Management Plan for the Southern Division: Los Angeles County District, California American Water. https://wuedata.water.ca.gov/public/uwmp_attachments/6452893912/Final%20Los%20Angeles%20County%20District%202015%20Urban%20Water%20Management%20Plan.pdf.