

5. Environmental Analysis

5.6 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Irvine Business Complex Vision Plan and Overlay Zoning Code to impact public health and safety in the City of Irvine. The analysis in this section is based, in part, upon the following information:

- *Facility Information Detail Database*, South Coast Air Quality Management District, September 8, 2008, <http://www.aqmd.gov/webappl/fim/prog/search.aspx>
- *Irvine Business Complex*, Environmental Data Resources, Inc. (EDR), September 9, 2008

A complete copy of the Environmental Data Resources Report is included in Appendix J.

5.6.1 Environmental Setting

5.6.1.1 Regulatory Background

Hazardous Materials

Various federal and state regulations and programs regulate the use, storage, and transportation of hazardous materials. Several applicable federal and state laws and programs are summarized in the following paragraphs.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was developed to protect the water, air, and soil resources from the risks created from past chemical disposal practices. This law is also referred to as the Superfund Act and regulates sites on the National Priority List (NPL), which are referred to as Superfund Sites.



Emergency Planning and Community Right-to-Know Act

The primary purpose of the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of the EPCRA require businesses to report the location and quantities of chemicals stored on-site to state and local agencies. 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 off-site transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and chemical recycling activities. The EPA maintains the Toxic Release Inventory (TRI) database that documents the information which regulated facilities are required to report annually.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the principal federal law that regulates generation, management, and transportation of hazardous waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste.

Hazardous Materials Release Notification

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

- Health and Safety Codes Sections 25270.7, 25270.8, and 25507
- Vehicle Code Section 23112.5

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- Public Utilities Code Section 7673 (PUC General Orders #22-B, 161)
- Government Code Sections 51018, 8670.25.5 (a)
- Water Codes Sections 13271, 13272
- California Labor Code Section 6409.1(b)10

Requirements for immediate notification of all significant spills or threatened releases include 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 Occupational Safety and Health Administration (Cal/OSHA) pursuant to 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), California Accidental Release Prevention (CalARP) Program, and Underground Storage Tank Program. The Unified Program is implemented at the local government level by Certified Unified Program Agencies (CUPAs). The CUPA with responsibility for the Irvine area is the Orange County Health Care Agency (OCHCA).

The Hazardous Materials Division of the OCHCA is designated by the State Secretary for Environmental Protection as the CUPA for Orange County in order to focus the management of specific environmental programs at the local government level. The CUPA is charged with the responsibility of conducting compliance inspections for regulated facilities in Orange County. Regulated facilities are those that handle hazardous material, generate or treat a hazardous waste, and/or operate an underground storage tank. The CUPA provides a comprehensive environmental management approach to resolve environmental issues. Inspections and business plans are managed by the Orange County Fire Authority (OCFA) on behalf of CUPA.

Hazardous Materials Business Plans

Both the federal government (Code of Federal Regulations) and the State of California (Health and Safety Code) require businesses that handle more than a specified amount (“reporting quantity”) of hazardous material or extremely hazardous material to submit a Hazardous Material Business Plan to their CUPAs.

Businesses plans must include an inventory of the hazardous materials at the facility. Businesses are required to update their business plan at least once every three years and the chemical inventory portion of their plan every year. Also, 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 in the event of a release. Additional requirements are identification of local emergency medical facilities, contact information for all company 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.

Businesses that handle hazardous materials are required by law to provide an immediate verbal report to the local fire authority and the Governor's Office of Emergency Services, California State Warning Center, 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.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) became effective on January 1, 1997, in response to Senate Bill 1889. The CalARP aims to be proactive and therefore requires businesses to prepare Risk Management Plans

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

(RMPs), which are detailed engineering analyses of potential accident releases present at a business and the mitigation measures that can be implemented to reduce 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 Fuel 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. 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 (SWRCB) 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 tanks with primary and secondary containment and monitoring systems. UST owners were given ten years to comply with the new requirements. However, many UST owners did not act by the deadline, so the state granted an extension for their replacement ending January 1, 2002. The Regional Water Quality Control Board (RWQCB), in cooperation with the Office of Emergency Services, maintains an inventory of leaking underground fuel tanks in a statewide database.

Superfund Amendments and Reauthorization Act

In 1986, Congress passed the Superfund Amendments and Reauthorization Act (SARA). Title 5 of this regulation requires that each community establish a Local Emergency Planning Committee (LEPC) that is responsible for developing an emergency plan for preparing for and responding to a chemical emergency. The emergency plan is required to include:

- 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).
- 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 (SERC) and publicized throughout the community. The CUPA is responsible for coordinating hazardous material and disaster preparedness planning and appropriate response efforts with city departments, as well as local and state agencies. The goal is to improve public and private sector readiness, and to mitigate local impacts resulting from natural or man-made emergencies.

South Coast Air Quality Management District Rule 1403

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 asbestos-containing material (ACMs). The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials (ACWM). Prior to demolition of the sites within the IBC, building materials will be carefully assessed for the presence of ACM, and removal, where necessary, will need to comply with state and federal regulations, including Rule 1403.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

OSHA Rule 29 and Code of Federal Regulations Part 1926

Prior to demolition of the sites within the IBC, building materials will be carefully assessed for the presence of lead-based paint, and its removal, where necessary, will comply with state and federal regulations, including Occupational Safety and Health Administration (OSHA) Rule 29, Code of Federal Regulations (CFR) Part 1926. The OSHA rule 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 of monitoring. In addition, Title 17, CCR, Division 1, Chapter 8, identifies procedures for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.

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.

Clean Water Act

The proposed project is subject to federal permit requirements under the Clean Water Act (CWA). In 1972 the Federal Water Pollution Control Act (later referred to as the CWA) was amended to require that the discharge of pollutants to waters of the United States from any point source be effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987 the CWA was again amended to add Section 402(p), requiring that the USEPA establish regulations for the permitting of stormwater discharges by municipal and industrial facilities and construction activities under the NPDES permit program.

The CWA authorizes the USEPA to permit a state to serve as the NPDES permitting authority in lieu of the USEPA. The State of California has in-lieu authority for a NPDES program. The Porter-Cologne Water Quality Control Act (Cal. Water Code Section 13000 et seq.) authorizes the SWRCB, through the Santa Ana RWQCB, to regulate and control the discharge of pollutants into waters of the state. The SWRCB entered into a memorandum of agreement with the USEPA on September 22, 1989, to administer the NPDES program governing discharges to waters of the United States.

In addition, the CWA requires the states to adopt water quality standards for water bodies and have those standards approved by the USEPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality objectives necessary to support those uses. Water quality objectives can be numerical concentrations or levels of constituents, such as lead or suspended sediment, or narrative statements that represent the quality of water needed to support a particular use. Because California had not established a complete list of acceptable water quality objectives, the USEPA Region IX has established numeric water quality criteria applicable to all receiving waters for certain toxic constituents in the form of the California Toxics Rule (CTR) (40 CFR 131.38).

Airport Land Use

Federal Air Regulations, Part 77

The Federal Aviation Administration (FAA) is charged with the review of construction activities that occur in the vicinity of airports. Their role in reviewing these activities is to ensure that new structures do not result in a hazard to navigation and thus derogate the safety of the National Airspace System. The regulations contained in Federal Air Regulations

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

(FAR) Part 77 are designed to ensure that no hazards are allowed to exist that would endanger the public. Proposed structures are also evaluated against Terminal En Route Procedures, which ensure that a structure does not adversely impact flight procedures. The construction of tall structures in the vicinity of an airport, including buildings, construction cranes, and cell towers, can be hazardous to the navigation of airplanes. The FAA, through FAR Part 77, established a method of identifying surfaces that should be free from obstructions in order to maintain sufficient airspace around airports. FAR Part 77, in effect, identifies the maximum height at which a structure would be considered an obstacle at any given point around an airport. The extent of the off-airport coverage needing to be evaluated for tall-structure impacts can extend miles from an airport facility. In addition, Part 77 establishes standards for determining whether objects constructed near airports will be considered obstructions in navigable airspace, sets forth notice requirements of certain types of proposed construction or alterations, and provides for aeronautical studies to determine the potential impacts of a structure on the flight of aircraft through navigable airspace.

Airport Environs Land Use Plan for John Wayne Airport

The State Aeronautics Act (California Public Utilities Code, Sections 21670, et seq.) establishes statewide requirements for airport land use compatibility planning. The Airport Environs Land Use Plan (AELUP) for John Wayne Airport is one of several prepared for the airports in Orange County. It is a 20-year land use compatibility plan for the airport to safeguard the general welfare of the inhabitants within its vicinity and ensure its continued operation. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace.

The California Department of Transportation's *California Airport Land Use Planning Handbook* provides guidelines for preparing airport compatibility plans. The handbook is a technical resource providing guidelines, in part, to define Aircraft Noise standards and criteria, accident potential zones, building height zones, and designated planning areas. Planning areas for this purpose (as opposed to City-identified Planning Areas outlined in the General Plan and Zoning Code) are based on the following criteria:

- Areas that are within the 60 dB CNEL contour
- Areas that are within the Clear Zones/Runway Protection Zones or Accident Potential Zones
- Areas subject to building height restrictions

Additionally, other areas within the County are deemed to be within the planning area for development proposals that are specifically germane to air transportation based on various criteria (large proposed populations, proposed structures exceeding 200 feet above ground level that may pose an adverse effect, and/or projects that could interfere with visual or electronic navigation systems).

5.6.1.2 Local Setting

The Irvine Business Complex (IBC), Planning Area 36, will be a mix of industrial, commercial, and residential land uses covering approximately 2,800 acres in the western portion of the City of Irvine in south/central Orange County. A 40-acre parcel of the IBC is detached and located to the south of the main body of the IBC project site. The IBC is bordered by the cities of Newport Beach to the south, Santa Ana and Costa Mesa to the west, and Tustin to the north. The residential village of Westpark in the City of Irvine is located adjacent to the IBC on the east. Adjacent to the IBC on the north is the City of Tustin and the former MCAS Tustin, currently being redeveloped with residential and commercial uses. The smaller, detached parcel is bound by Jamboree Road and the San Joaquin Marsh and is adjacent to the City of Newport Beach.

Certain features could influence the impact of hazardous material releases occurring within the IBC, including prevailing wind patterns and the direction of groundwater flow:



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- Local meteorology is discussed in Section 5.2, *Air Quality*, of the EIR. In summary, wind patterns across the South Coast Air Basin (SoCAB) are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season. Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.
- The IBC is located within the Irvine Groundwater Management Zone of the lower Santa Ana River basin. Shallow groundwater ranges from 10 feet below ground surface (bgs) in the northern portion of the IBC to 75 feet bgs in the southern portion of the IBC. Shallow groundwater is not used for municipal or domestic purposes due to poor water quality. The principal aquifer in the Irvine Groundwater Management Zone ranges from 200 to 1,200 feet bgs and is used for drinking water supply. Several facilities within the IBC are undergoing groundwater investigations and remediation due to chemical and petroleum contamination of the shallow aquifer; details regarding these investigations can be found on the Santa Ana Regional Water Quality Control Board's (RWQCB's) Geotracker website.

Hazardous Materials Transport, Use, or Disposal

The routine transport, use, or disposal of hazardous materials for the project would primarily be associated with construction and demolition activities. The IBC Overlay Zone proposes establishing policies and development standards for the transition of certain portions of the IBC from primarily industrial and/or office land uses into mixed-use districts that accommodate office and residential land uses while protecting existing businesses.

Implementation of the project may involve the demolition of existing structures. Additionally, parking areas, drive aisles, and other hardscape and landscape may require removal. Debris from the structures would require an evaluation for lead-based paint and ACM. These materials would be characterized and classified for disposal purposes. It is anticipated that ACWM may be transported to a local landfill such as the Azusa Land Reclamation Landfill in Azusa, Los Angeles County, California. This facility is permitted for direct land filling of ACWM, both friable and nonfriable, into a fully lined, RCRA Subpart D landfill unit. Lead waste that is classified as hazardous waste may be transported to a facility such as the Chemical Waste Management facility in Kettleman Hills, California. This facility is a CERCLA-approved, TSCA and RCRA-permitted, Class I, II, and III landfill. Based on the type and age of the buildings, there is a potential for hazards involving the release of asbestos and lead-based paint as a result of the demolition of these structures. Without proper monitoring, removal, and disposal, lead-based paint chips and friable asbestos may be released to the environment, causing potential exposure to humans.

Other project operations may involve the use of household hazardous materials (e.g., solvents, cleaning agents, paints, pesticides) typical of residential land uses.

In the context of the seven pending residential projects described in Section 3.3.3, hazardous materials that would be encountered during the development and operational phases would be similar to those mentioned in the preceding paragraphs.

Hazardous Materials Risk of Upset

The OCFA conducts Uniform Fire Code inspections and assists in reducing risks associated with the use of hazardous materials in the community. The OCFA also has a dedicated hazardous materials response team. The hazardous materials control and safety programs and available emergency response resources of the OCFA, along with OCFA periodic inspections to ensure regulatory compliance, reduce the potential risk associated with commercial and industrial businesses.

The OCFA administers the CalARP Program, which includes the federal Accidental Release Prevention Program (Title 40, CFR Part 68) with certain additions specific to the state pursuant to Article 2, Chapter 6.95, of the Health and Safety

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Code. The purpose of the CalARP Program is to prevent accidental releases of regulated hazardous substances. Listed stationary regulated substances with more than a threshold quantity of a regulated substance are evaluated to determine the potential for and impacts of accidental releases from business operations. The owner or operator of a stationary source is required to develop and submit a risk management plan (RMP) to prevent such accidental releases to the environment.

The CalARP regulations require the following:

- Stationary sources must develop and implement an accidental release prevention program and maintain documentation of the program at the business location. The accidental release prevention program includes an analysis of the potential off-site consequences should an accidental release occur, a five-year record of business accidents, prevention program for releases of hazardous substances, and an emergency response program.
- Stationary sources must develop and submit an RMP to OCFA. The RMP provides a summary of the accidental release prevention program and is made available to government agencies and the public.
- Stationary sources must implement the accidental release prevention program and update the RMP within five years of the initial submission, when processes change, or as required by CalARP regulations.

Based on a review of OCFA records, there are five businesses within the IBC that are regulated under CalARP with RMPs submitted to the OCFA (see Figure 5.6-1). The relevance of these facilities in the context of the seven pending residential projects described in Section 3.3.3 is presented in the Table 5.6-1. Data regarding the locations of the CalARP-regulated facilities and the consequences of accidental releases were obtained during various Industrial Adjacency Assessments (IAAs) completed by The Planning Center for the City of Irvine. The IAAs were prepared for potentially impacted residential projects within the IBC due to adjacent or nearby industrial operations.



*Table 5.6-1
Summary of Pending IBC Residential Development Projects and
Nearby CalARP-Regulated Facilities*

Project Name	Location	Nearby CalARP-Regulated Facilities
Martin Street Condos	2301 Martin Street	An IAA was completed for the pending residential project (The Planning Center, 2006). Incompatibility issues were not identified.
2851 Alton	Northwest corner of Alton and Murphy	Based upon a review of several IAAs, a CalARP-regulated facility, B. Braun, is in close proximity to the site. The facility is located at 2525 McGaw Avenue, roughly 880 feet west of the project. According to a representative of the OCFA, Mr. Robert Distaso, the pharmaceuticals manufacturing facility stores up to 2,000 gallons of liquefied ammonia and under the worst-case release scenario (the release of the largest quantity of a regulated substance from a vessel or process line failure that results in the greatest distance to an endpoint), potential impacts would not extend beyond the facility's boundaries.
Avalon Jamboree II	16901 Jamboree	An IAA was completed for the pending residential project (The Planning Center, 2008). The IAA identified a CalARP-regulated facility, Cosmotronic, Inc., located at 16721 Noyes Avenue, approximately 500 feet north of the pending residential project. The facility falls under the requirements of CalARP due to its use of etching solutions. A RMP has been filed with the OCFA, however, many parts of the report contain proprietary information and are not for release to the public. According to the OCFA, potential effects would reach slightly beyond the Cosmotronic, Inc. property boundary under the worst-case release scenario. Based on the preceding information, the likelihood that an accident or major release at Cosmotronic would affect the residents of the proposed project site is judged to be very low. The B. Braun facility, located at 2525 McGaw Avenue and more than 800 feet southwest of the proposed residential project site, is also regulated through CalARP. As stated above, the

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

*Table 5.6-1
Summary of Pending IBC Residential Development Projects and
Nearby CalARP-Regulated Facilities*

Project Name	Location	Nearby CalARP-Regulated Facilities
		pharmaceuticals manufacturing facility stores up to 2,000 gallons of liquefied ammonia and potential impacts would not extend beyond the property's boundaries under the worst case release scenario.
Irvine Technology Center	Northwest corner of Jamboree and Campus	There are not any CalARP-regulated facilities in close proximity to this pending residential development.
Kilroy	17150 Von Karman	An IAA was completed for the pending residential project (The Planning Center, 2007). The IAA determined that a CalARP-regulated facility, B. Braun is in close proximity to the site. The facility is located at 2525 McGaw Avenue and east of the project. As stated above, the pharmaceuticals manufacturing facility stores up to 2,000 gallons of liquefied ammonia and under the worst-case release scenario, potential impacts would not extend beyond the property's boundaries.
Alton/Millikan Apartments	16952 Millikan	An IAA was completed for the pending residential project (The Planning Center, 2007). The IAA determined that a CalARP-regulated facility, Cosmotronic, Inc., is in close proximity to the site. The facility is located at 16721 Noyes Avenue, approximately 890 feet northeast of the pending residential project. As stated above, the facility falls under the requirements of CalARP due to its use of etching solutions. Under the worst-case scenario, potential effects would reach slightly beyond the Cosmotronic, Inc. property boundary. As such, the likelihood that an accident or major release at Cosmotronic would affect the residents of the proposed project site is judged to be very low. B. Braun, located 2525 McGaw Avenue and approximately 300 feet southwest of the pending residential project, was also identified as a CalARP regulated facility. As stated above, the pharmaceuticals manufacturing facility stores up to 2,000 gallons of liquefied ammonia and under the worst-case release scenario, potential impacts would not extend beyond the property's boundaries.
2852 Kelvin	2852 Kelvin	There are not any CalARP-regulated facilities in close proximity to this pending residential development.

Hazardous Air Emissions

The South Coast Air Quality Management District (SCAQMD) maintains a web tool to search for public information about SCAQMD-regulated facilities that have permits to operate equipment that release pollutants into the air. The system is called the Facility Information Detail (FIND). The FIND database provides nonconfidential facility information, including facility name, address, facility status (active, out-of-business, etc.), standard industrial classification code, application and permit number, permit and application status, application and permit issue dates, equipment type and description, history of notices of violation and recent notices to comply (from January 2003 to present), reported criteria and toxic emissions by year, and pollutant type for the years that data are currently available in the database.

Based on the FIND database query, there are approximately 511 regulated facilities in or in the immediate vicinity of the IBC. Of these, 8 are identified as Title V facilities within the confines of the IBC (see Figure 5.6-2). Title V is a federal program designed to standardize air quality permits and the permitting process for major sources of emissions across the United States. The name "Title V" refers to Title V of the 1990 federal Clean Air Act Amendments, which requires the USEPA to establish a national operating permit program. To fulfill this requirement, USEPA adopted regulations (Title 40 of the Code of Federal Regulations, Chapter 1, Part 70 [Part 70]) that require states and local permitting authorities to develop and submit federally enforceable operating permit programs for USEPA approval. The SCAQMD adopted Regulation XXX – Title V Permits in 1993 to interface the federal permitting requirements with the submitted Title V permit program.

5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

Title V applies to major sources. USEPA defines a major source as a facility that emits or has the potential to emit any criteria pollutant or hazardous air pollutant at levels equal to or greater than the major source thresholds. There are no public or private K–12 schools in the IBC; however, the project will create a mixed residential and industrial environment that may result in compatibility issues when siting residential developments within or adjacent to areas that may be impacted by existing facility emissions.

Information regarding the Title V facilities, in the context of the seven pending residential projects described in Section 3.3.3, is presented in Table 5.6-2. Preliminary evaluations of compatibility are based in part upon the IAAs.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.6-2

Summary of Pending IBC Residential Development Projects and Nearby Title V Facilities

Project Name	Location	Nearby Title V Facilities
Martin Street Condos	2301 Martin Street	Allergan, located at 18700 Von Karman Avenue, is located roughly 300 feet to the northeast, and according to SCAQMD FIND is an emitter of carcinogenic compounds including methylene chloride, benzene, carbon tetrachloride, formaldehyde, and ammonia.
2851 Alton	Northwest corner of Alton and Murphy	B. Braun, located at 2525 McGaw Avenue, is located roughly 900 feet to the west, and according to SCAQMD FIND is an emitter of carcinogenic compounds including benzene and formaldehyde.
Avalon Jamboree II	16901 Jamboree	An Industrial Adjacency Assessment (IAA) was completed for the pending residential project (The Planning Center, 2008). Cosmotronic, Inc. was identified a facility with SCAQMD-permitted equipment and emissions of toxic and carcinogenic pollutants. Based upon the SCAQMD database/records review, the facility was identified as an emitter of formaldehyde which is considered to be a carcinogen. For reference the facility is located approximately 500 feet north of the pending residential project. B. Braun was also identified as a facility with permitted equipment and carcinogenic emissions of benzene and formaldehyde. The facility is located at 2525 McGaw Avenue and is more than 800 feet southwest of the pending residential project. Further evaluation of the potential risk to project occupants associated with exposure to toxic and carcinogenic air emissions from Cosmotronic, Inc. and B. Braun was recommended.
Irvine Technology Center	Northwest corner of Jamboree and Campus	An IAA was completed for the pending residential project (The Planning Center, 2007). Allergan, located at 18700 Von Karman Avenue, roughly 1,000 feet to the north, was identified as having equipment permitted by SCAQMD and determined to be an emitter of carcinogenic compounds including methylene chloride, benzene, carbon tetrachloride, formaldehyde, and ammonia. Further evaluation of the potential risk to project occupants associated with exposure to the toxic and carcinogenic air emissions was recommended.
Kilroy	17150 Von Karman	An Industrial Adjacency Assessment (IAA) was completed for the pending residential project (The Planning Center, 2007). Several facilities with SCAQMD permitted equipment and toxic and/or carcinogenic emissions were reported. While emissions from these facility were characterized as low to moderate, an air exposure assessment was recommended to quantify the potential risk to human health and determine compatibility with the proposed residential project.
Alton/Millikan Apartments	16952 Millikan	An IAA was completed for the pending residential project (The Planning Center, 2007). Based upon on the SCAQMD database/records review, Cosmotronic, Inc. was identified as an emitter of formaldehyde which is considered to be a carcinogen. The facility, located at 16721 Noyes Avenue, is situated approximately 890 feet northeast of the pending residential project. B. Braun was also identified as a facility with permitted equipment and carcinogenic emissions of benzene and formaldehyde. The facility is located at 2525 McGaw Avenue and is southwest of the pending residential project. Further evaluation of the potential risk to project occupants associated with exposure to the toxic and carcinogenic air emissions was recommended.
2852 Kelvin	2852 Kelvin	An IAA was completed for the pending residential project (The Planning Center, 2007). AT&T/SBC was determined to be a source of hazardous air emissions. The facility is located at 2681 Kelvin Avenue, approximately 450 feet north of the proposed residential project. A total of 6 diesel backup generators were identified at the facility during an onsite interview. Diesel particulate may be emitted by the generators. Further evaluation of the potential risk to project occupants is recommended.

5. Environmental Analysis

CalARP Facilities



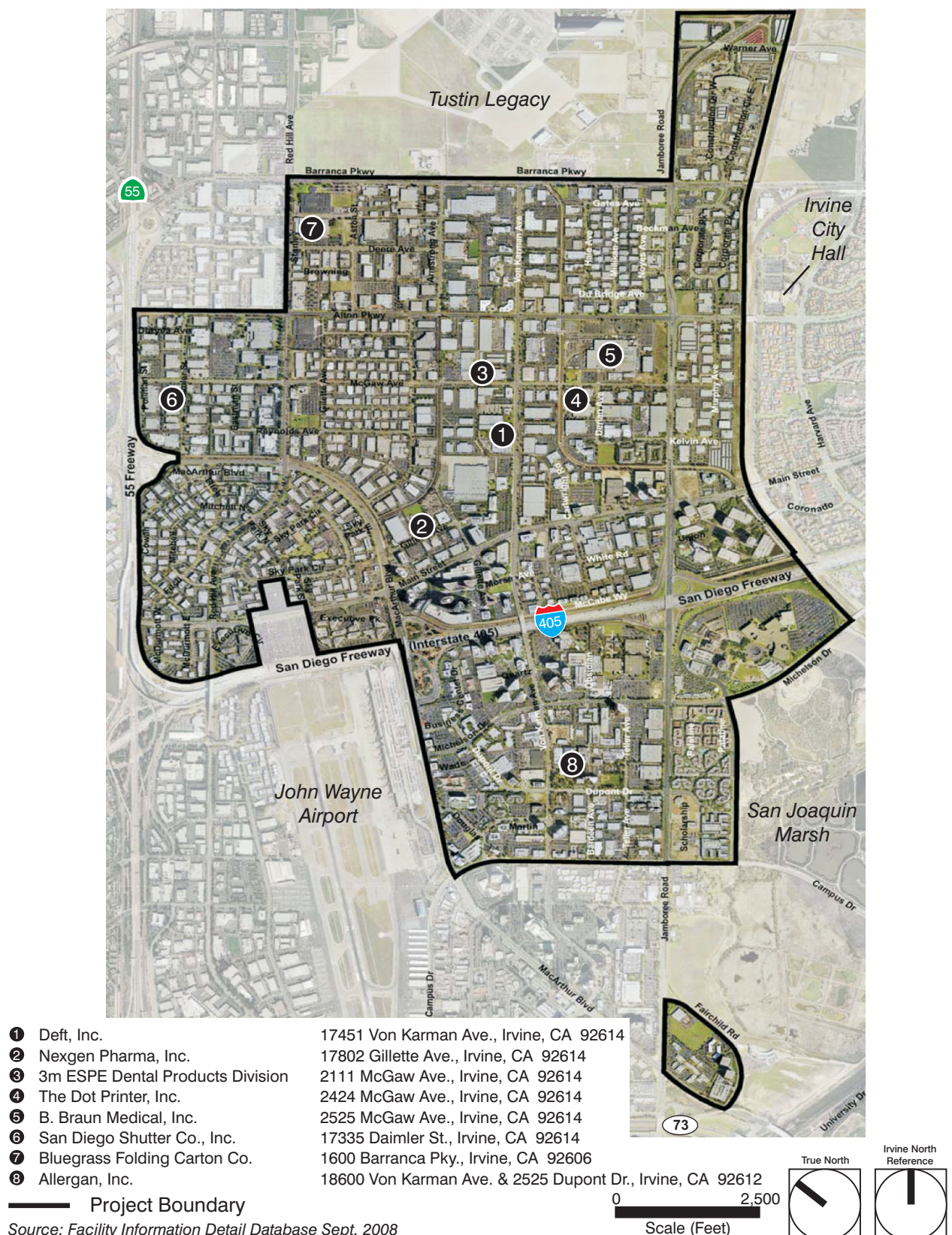
5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

5. Environmental Analysis

SCAQMD Title V Facilities



5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

Listed Hazardous Substance Releases

Based on a review of the Environmental Data Resources (EDR) database report, the project encompasses an area that includes numerous businesses that have had historical releases of hazardous substances to the environment and/or are undergoing environmental investigation or remediation.

Database searches identified the following types of sites in the general vicinity of the IBC. Listing does not imply that all sites are contaminated or require remediation. Some of the listed sites may have already been granted site closure by a regulatory agency.

- 1 Department of Defense site was listed. The Tustin Marine Corps Air Station is located adjacent to and north of the IBC. This site has undergone investigation and remediation activities, including ongoing monitoring for a groundwater contaminant plume.
- 10 sites were listed by the USEPA Toxic Chemical Release Inventory System. These sites are identified due to operational releases of toxic substances to the air, water, and land in reportable quantities specified in the Superfund Amendments and Reauthorization Act Title III, Section 313.
- 112 sites were listed on the Cortese list, which is maintained by the SWRCB, Integrated Waste Management Board, and the Department of Toxic Substances Control. These sites are listed due to a release of hazardous substances.
- 173 sites were listed on the California Regional Water Quality Control Board Leaking Underground Storage Tank (LUST) list.
- 41 sites were listed on the California Regional Water Quality Control Board Spills Leaks Investigation and Cleanup (SLIC) list.
- 39 sites were listed on the Orange County Industrial Site Cleanups list maintained by the Orange County Health Care Agency.
- 12 sites were listed on the Department of Toxic Substances Control Envirostor database. These sites are listed due to agency involvement with respect to investigation and/or remediation of hazardous substance contamination.



Information regarding these listings, in the context of the seven pending residential projects described in Section 3.3.3, is presented in Table 5.6-3. The IAAs, aforementioned in the preceding sections, and other technical documents were reviewed to obtain information regarding the locations and status of relevant hazardous substance releases.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

*Table 5.6-3
Summary of Pending IBC Residential Development Projects and
Relevant Hazardous Substance Releases*

Project Name	Location	Nearby Facilities with Hazardous Substance Releases
Martin Street Condos	2301 Martin Street	An IAA was completed for this property (The Planning Center, 2006). A review of the most recent Phase I Environmental Site Assessment (ESA) for the pending residential project (Carlin Environmental Consulting, Inc., 2005) indicated VOC contamination beneath the Hyogo Atrium site, which lies across Von Karman Avenue to the east. The Phase I ESA report stated that the extent of groundwater contamination had not been reported, and for that reason identified a potential for encountering contaminated groundwater during construction-related excavation or dewatering activities as a potential concern. To better evaluate potential risks associated with groundwater contamination at the Hyogo Atrium site, the project manager at the RWQCB was contacted and technical reports concerning periodic groundwater monitoring and remediation system operation were obtained and reviewed. The contamination is being cleaned up using a network of extraction wells and a permitted treatment system. Treated groundwater, in turn, is discharged to the storm sewer under a NPDES permit. The shallowest groundwater occurs at depths ranging from 17 to 26 feet below ground surface (fbgs) across that site, and in that zone flows radially towards the center of the Hyogo Atrium site due to the influence of the extraction and treatment system. Monitoring well MW-8A, located less than 200 feet south of Martin Street, is the closest well to the proposed project and probably provides the best indication of groundwater quality in that area. Laboratory testing of samples from that well showed that VOCs are either non-detect, or where detected, present at levels well below drinking water standards (i.e., State and Federal Maximum Contaminant Levels or MCLs). Based on these data, it appears that groundwater contamination associated with historical subsurface releases at the Hyogo Atrium site would not adversely affect occupants of the proposed project.
2851 Alton	Northwest corner of Alton and Murphy	A focused environmental records search was completed for the Lockheed Martin Maritime Systems facility, located at 17100 Murphy Avenue (The Planning Center, 2007). This facility is located within 700 to 800 feet of the pending residential project. Based upon a review of government-maintained databases, there have not been any unregulated releases of hazardous substances or hazardous wastes at the property, nor have any federal, state, or local agencies required invasive site assessment or site remediation.
Avalon Jamboree II	16901 Jamboree	An IAA was completed for the pending residential project (The Planning Center, 2008). Incompatibility issues related to contaminated soil, soil vapor, or groundwater were not identified during the IAA analysis.
Irvine Technology Center	Northwest corner of Jamboree and Campus	An IAA was completed for the pending residential project (The Planning Center, 2007). Several California Leaking Underground Storage Tank and Cortese hazardous substance release sites were identified through the analysis. These properties include the former VNT Partnership, former American Data Industries, former Link System, UCI North Campus, UCI Fleet Service, and former Beckman Instruments sites. Due to the proximity of these hazardous substance releases to the site, the shallow depth of groundwater in the IBC, and reports of incomplete remedial activities, a comprehensive review of regulatory agency case records was recommended for these sites. Based on the recommendation, a regulatory agency file review was conducted by Caporale Consultants, Inc. (CCI) to rule out any potential impacts to the property from these off-site sources of contamination. A letter report was prepared by CCI, dated September 21, 2007, that reviewed regulatory agency files associated with sites identified in the IAA and compared residual soil and groundwater levels to the environmental screening levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board. CCI concluded that none of the sites posed a threat of contaminant migration to the ITC project site. The conclusions were based on the low or nondetectable contamination

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.6-3
Summary of Pending IBC Residential Development Projects and
Relevant Hazardous Substance Releases

Project Name	Location	Nearby Facilities with Hazardous Substance Releases
		levels identified in the confirmation sampling, distance to the project site, depth and direction of groundwater, and, where applicable, regulatory site closure.
Kilroy	17150 Von Karman	An IAA was completed for the pending residential project (The Planning Center, 2007). Incompatibility issues related to contaminated soil, soil vapor, or groundwater were not identified during the IAA analysis.
Alton/Millikan Apartments	16952 Millikan	An IAA was completed for the pending residential project (The Planning Center, 2007). Incompatibility issues related to contaminated soil, soil vapor, or groundwater were not identified during the IAA analysis.
2852 Kelvin	2852 Kelvin	An IAA was completed for the pending residential project (The Planning Center, 2007). Incompatibility issues related to contaminated soil, soil vapor, or groundwater were not identified during the IAA analysis.

Potential Hazards to Aircraft in Flight

The AELUP incorporates Part 77, Objects Affecting Navigable Airspace, of the FAR as a guideline to describe the ultimate height of structures under “Imaginary Surfaces,” as defined in FAR Part 77. This area is also known as the “horizontal surface” area. Structures should not exceed the elevations defined in FAR Part 77.25 unless, upon completion of an aeronautical study conducted by the FAA, the Airport Land Use Commission (ALUC) finds that the structure will not adversely affect aeronautical operations, including interference with navigational aids or published flight paths and procedures. As shown on Figure 5.6-3, *Height Restriction Zone*, the IBC Mixed-Use project site is located within the FAR Part 77 Imaginary Surfaces area.



On March 17, 1964, the Orange County Board of Supervisors recorded an “Aviation Easement for Orange County Airport” covering approximately 18,500 acres around the airport. This aviation easement restricts the construction of buildings and/or structures into air space at elevations above 203.68 feet above mean sea level (amsl). The Orange County Board of Supervisors has allowed certain nonresidential buildings to exceed this height limitation on a case-by-case basis.

Potential Hazards to People and Structures on the Ground

The southwestern part of the IBC is primarily located within the Safety Zone 6 - Traffic Pattern Zone, as defined by Caltrans’ *California Airport Land Use Planning Handbook* (January 2002). Other zones that encroach onto the southwestern portion of the IBC from the John Wayne airport include Safety Zone 5 - Sideline Zone, Safety Zone 4 - Outer Approach/Departure Zone, and Safety Zone 3 - Inner Turning Zone. Risk factors associated with Zone 6 generally include a low likelihood of accident occurrence. Safety Zones 3, 4, and 5 prohibit the development of children’s schools, large day care centers, hospitals, and nursing homes in these areas. These zones also call for the avoidance or limited development of residential uses. Nonresidential uses having moderate or high usage intensities should also be avoided within these zones.

Emergency Plans

The City has prepared an Emergency Management Plan (EMP) to provide guidance for the City’s response to emergency situations such as natural disasters, technological incidents, and national security emergencies. Technological incidents include those ranging from failure of major computer systems managing backbone infrastructure and vital services to spills of hazardous materials used in technology or manufacturing processes. The City’s Emergency Services Ordinance (Title 4, Division 9 of the City’s Municipal Code) provides for the “preparation and carrying out of plans for the protection of persons and property...in the event of an emergency; the direction of the emergency organization; and the coordination of emergency functions....” The Emergency Response Plan does not address day-to-day emergencies or

5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

design of development projects, or land use planning efforts such as general plan amendments and zone changes. Instead, it focuses on potential large-scale disasters that would require unusual emergency responses, such as mass evacuations. All new development must follow the City's emergency response and evacuation guidelines and be compatible with emergency evacuation routes.

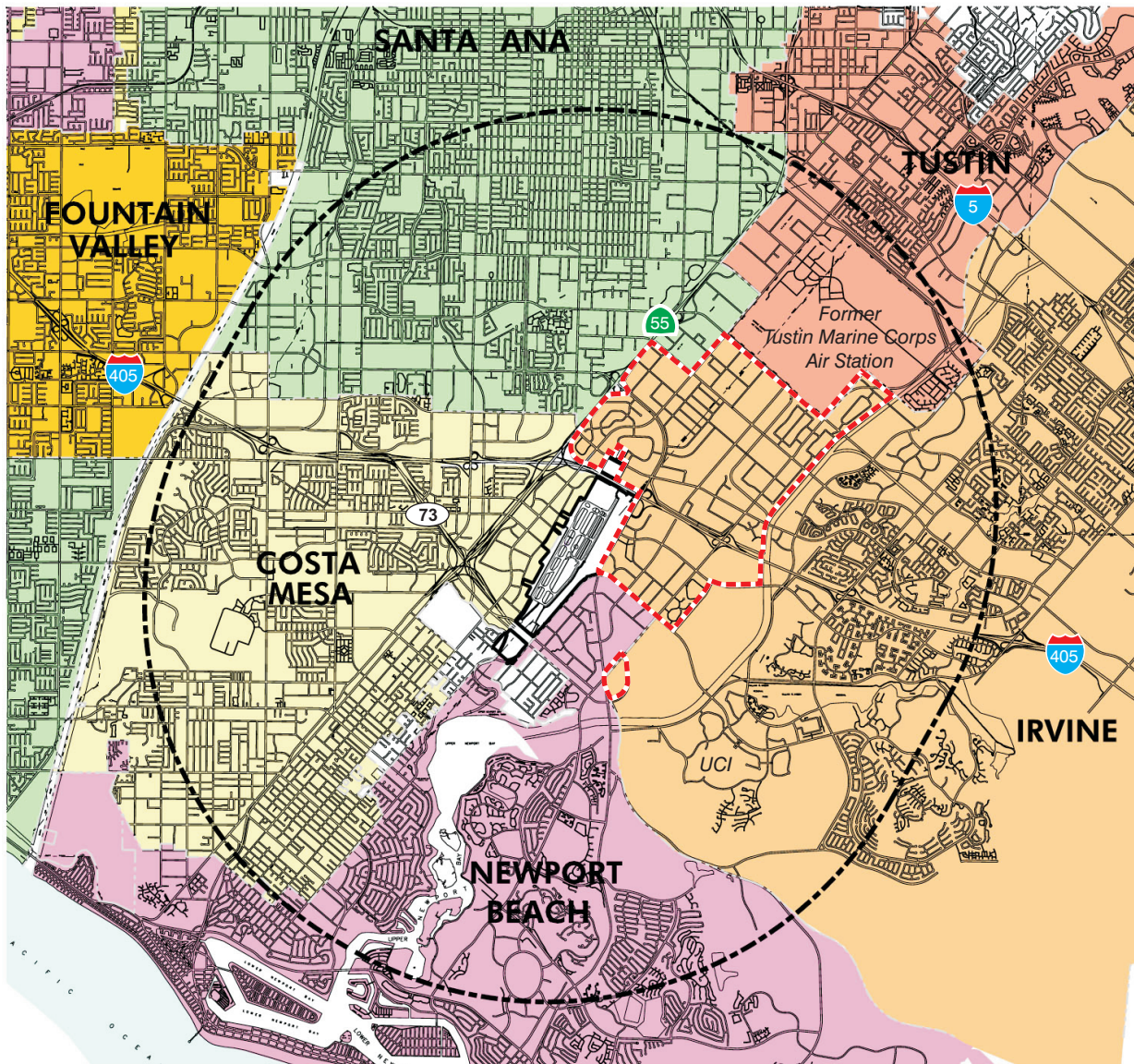
5.6.2 *Thresholds of Significance*

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.
- 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.

5. Environmental Analysis

Height Restriction Zone



LEGEND

- 20,000' Radius
- - - - - City Boundaries
- Airport Boundaries
- - - - - Project Boundary

Note: County unincorporated areas are shown in white.

Source: Airport Land Use Commission for Orange County

IBC Vision Plan and Mixed Use Overlay Zoning Code Recirculated DEIR

0 7,500
Scale (Feet)



5. *Environmental Analysis*

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Both Initial Studies, included as Appendices A and B, substantiate that impacts associated with the following thresholds would be less than significant:

- Threshold H-6
- Threshold H-8

These impacts will not be addressed in the following analysis.

5.6.3 Environmental Impacts

Existing Plans, Programs, and Policies

The following measures are existing plans, programs, or policies that apply to the proposed project and will help to reduce and avoid potential impacts related to hazards and hazardous materials:

- PPP 6-1 If any underground storage tanks (USTs) are encountered during site grading and excavation activities, they shall be removed in accordance with the existing standards and regulations of, and oversight by, the Orange County Health Care Agency (OCHCA), based on compliance authority granted through the California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Tank Regulations. The process for UST removal is detailed in the OCHCA's "Underground Storage Tanks: The Basics." Soil samples from areas where storage tanks have been removed or where soil contamination is suspected shall be analyzed for hydrocarbons including gasoline and diesel in accordance with procedures set forth by OCHCA. If hydrocarbons are identified in the soil, the appropriate response/remedial measures will be implemented as directed by OCHCA with support review from the RWQCB until all specified requirements are satisfied and a Tank Closure Letter is issued. Any aboveground storage tank (AST) in existence at the commencement of site development shall be removed in accordance with all applicable regulations under the oversight of Orange County Fire Authority. Compliance requirements relative to the removal/closure of storage tanks are set forth through the California Health and Safety Code, Sections 25280 through 25299.
- PPP 6-2 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.
- PPP 6-3 Prior to approval of a conditional use permit, project applicants shall prepare a Fire Master Plan for submittal to the Orange County Fire Authority (OCFA) consistent with OCFA Guideline B-09 (Fire Master Plans for Commercial and Residential Development).
- PPP 6-4 Federal law requires compliance with Rule 29 of the Code of Federal Regulations (CFR) Part 1926. Prior to site demolition activities, building materials shall be carefully assessed for the presence of lead-based paint, and its removal, where necessary, must comply with state and federal regulations, including Occupational Safety and Health Administration (OSHA) 29 CFR Part 1926. The OSHA rule 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 of monitoring. Furthermore, the requirements of California Code of Regulations, Title 17, Division 1, Chapter 8, identify procedures that must be followed for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- PPP 6-5 Prior to site demolition activities, building materials must be carefully assessed for the presence of asbestos-containing materials (ACM), and removal of this material, where necessary, must comply with state and federal regulations, including SCAQMD Rule 1403, which specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials.
- PPP 6-6 During site decommissioning and demolition activities, hazardous wastes must be managed in accordance with the requirements of Title 22, Division 4.5 of the California Code of Regulations. Title 22 sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. 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 such as the requirements for transporting shipments of hazardous waste, manifesting, vehicle registration, and emergency accidental discharges during transportation.
- PPP 6-7 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.
- PPP 6-8 Evidence of soil and/or groundwater contamination (e.g., chemical odors, staining) unrelated to above/underground storage tank releases may be encountered during site development. The appropriate agency (e.g., OCHCA, DTSC, or the Regional Water Quality Board) shall be notified if these conditions are encountered during construction or grading activities. With their oversight, an environmental site assessment would be completed and a determination shall be made as to whether a cleanup is required. Cleanup activities would be consistent with all applicable state and local rules, regulations, and laws. A cleanup would not be considered complete until confirmatory samples of soil and/or groundwater reveal levels of contamination below the standards established by the oversight agency. Alternatively, a risk assessment may be prepared for the site to determine that there are no human or environmental risks associated with leaving contamination below specific levels in place. Construction in the impacted area shall not proceed until a “no further action” clearance letter or similar determination is issued by the oversight agency, or until a land use covenant is implemented.

Project Design Features

Many aspects of the project's proposed land uses and design directly and indirectly reduce the project's impacts on hazards and hazardous materials. These Project Design Features (PDFs) are summarized below and their relevance to reduced impacts is described more fully in the impacts analysis that follows.

- PDF 6-1 As described in the proposed zoning for the project, ~~related to~~ building height limitations, recordation of aviation easements, obstruction lighting and marking, and airport proximity disclosures and signage shall be provided ~~per Orange County standards~~ consistent with the Airport Environs Land Use Plan standards for John Wayne Airport.
- PDF 6-2 As described in the proposed zoning related to residential disclosures, all discretionary applications for residential or residential mixed use shall include a condition of approval for disclosure to residents clearly outlining the issues associated with living in a mixed-use environment. The language for this disclosure

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

shall be as specified by the Community Development Director. Copies of each signed disclosure shall be made available for review upon written request by the City.

- PDF 6-3 As described in the proposed zoning code related to hazardous material standards, individual development sites may have existing facilities, such as underground storage tanks, transformers or clarifiers, that contain hazardous materials ~~would be demolished as part of a proposed development~~. To mitigate any hazardous-materials-related impacts ~~during the removal of such~~ related to these facilities, the project applicant shall submit a Site Assessment prior to the City deeming the development application complete ~~the Director of Community Development, in conjunction with the Orange County Fire Authority, shall include specific project conditions of approval as part of the discretionary review process for the proposed development~~. If hazardous materials are identified during the site assessment, the appropriate response/remedial measures will be implement in accordance with the directives of the Orange County Fire Authority (OCFA), Orange County Health Care Agency (OCHCA) and/or the Regional Water Quality Control Board (RWQCB), as appropriate. If soils are encountered during site development that are suspected of being impacted by hazardous materials, work will be halted and site conditions will be evaluated by a qualified environmental professional. The results of the evaluation will be submitted to OCFA, OCHCA, and/or RWQCB, and the appropriate response/remedial measures will be implemented, as directed by OCFA, OCHCA, RWQCB, or other applicable oversight agencies, until all specified requirements of the oversight agencies are satisfied and a no-further-action status is attained.
- PDF 6-4 As required by the proposed zoning code, applications for new residential and/or residential mixed-use development shall submit data to the Director of Community Development, to evaluate compatibility with surrounding uses with respect to issues including but not limited to: noise, odors, truck traffic and deliveries, hazardous materials handling/storage, air emissions, ~~and~~ soil/groundwater contamination, heliports/helistops and John Wayne Airport compatibility. Structures that penetrate the 100:1 Notification Surface shall file a Form 7460-1 Notice of Proposed Construction or Alternation with Federal Aviation Administration. Residential land uses shall be prohibited in Safety Zone 3.
- PDF 6-5 For all residential projects located within 1,000 feet of an industrial facility which emits toxic air contaminants, the Project Applicant shall submit a health risk assessment prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the South Coast Air Quality Management District to the Community Development Director prior to approval of any future discretionary residential or mixed-use project. If the HRA shows that the incremental cancer risk exceeds one in one hundred thousand (1.0E-05), or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that Best Available Control Technologies for Toxics are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to, scrubbers at the industrial facility, or installation of Minimum Efficiency Reporting Value filters rated at 14 or better at all residential units.
- PDF 6-6 Residential development shall not be permitted within a one-parcel buffer surrounding the property at 17451 Von Karman, based on existing parcelization as of the date of the certification of the Environmental Impact Report. The area within the one parcel buffer is depicted in Figure 1 in the City of Irvine Zoning Code Chapter 5-8.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

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

IMPACT 5.6-1: PROJECT CONSTRUCTION AND/OR OPERATIONS WOULD INVOLVE THE TRANSPORT, USE, AND/OR DISPOSAL OF HAZARDOUS MATERIALS. [THRESHOLDS H-1, H-2, AND H-3]

Impact Analysis:

Hazardous Materials Transport, Use, or Disposal

Hazardous materials, including but not limited to asbestos containing materials (ACMs), lead-based paint, or petroleum-impacted soil, may be encountered during redevelopment and demolition activities at a project site within the IBC. Other construction activities should involve only minor amounts of hazardous materials or waste, such as oil, grease, and fuels associated with construction equipment. These activities would be short term. Existing regulations with respect to hazardous materials abatement, transportation, and disposal, including those referenced in PPPs 6-1, 6-2, and 6-4 through 6-8, will be followed during site development and are designed to be protective of human health. According to PDF 6-3, to mitigate any hazardous waste impacts related to the demolition of existing facilities (e.g., transformers or clarifiers), the Director of Community Development, in conjunction with the Orange County Fire Authority, shall include specific project conditions of approval as part of the discretionary review process. Project operations could involve the use of household hazardous materials (e.g., solvents, cleaning agents, paints, pesticides) typical of residential facilities that, when used correctly, would not result in a significant hazard to residents in the proposed project area. With adherence to the PPPs and PDFs described previously, no significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous waste/materials is anticipated as a result subsequent development pursuant to the proposed project.

Hazardous materials that may be encountered during the development and operational phases in the context of the seven pending residential projects described in Section 3.3.3 would be similar to those mentioned in the preceding paragraphs. With adherence to the PPPs and PDFs described previously, development-specific impact analyses pertaining to hazardous materials transport, use, and disposal are not necessary.

Hazardous Materials Risk of Upset

Although some of the seven pending residential projects described in Section 3.3.3 are in close proximity to CalARP-regulated facilities, the evaluation provided in Table 5.6-1 indicates that these project, would not be impacted by an accident or major release at the CalARP-regulated facilities under the worst-case release scenario.

However, implementation of the IBC project could result in the development of sensitive land uses in proximity to facilities that handle, store, or transport hazardous materials. Compliance with local, state and federal regulations regarding hazardous materials is expected to reduce the risk posed by hazardous materials use and management to a less than significant level. Site-specific uses within the IBC are subject to regulatory requirements that are promulgated to reduce the risks associated with hazardous materials management. One such regulatory requirement is the preparation of a RMP, which is designed to prevent or minimize a release of hazardous materials to the environment at facilities that handle acutely hazardous materials by developing and following an accident prevention program.

The OCFA conducts Uniform Fire Code inspections, which assists in reducing risks associated with the use of hazardous materials in the community. The OCFA also has a dedicated hazardous materials response team. The hazardous materials control and safety programs and available emergency response resources of the OCFA, along with OCFA periodic inspections to ensure regulatory compliance, reduce the potential risk associated with nearby land uses. In addition, all new development must follow the City's emergency response and evacuation guidelines and be compatible with emergency evacuation routes.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

As described in PDF 6-2, pursuant to the proposed zoning code related to residential disclosures, all discretionary applications for residential or residential mixed use shall include a condition of approval for disclosure to residents clearly outlining the issues associated with living in a mixed-use environment. The language for this disclosure shall be as specified by the Community Development Director. Specifically, prior to the issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreements, part of the sales literature, and part of the CC&Rs for the project. The Hazardous Substances and Emergency Safety Plan includes staff training, emergency tools and First Aid provisions, supervision of children or other individuals in an emergency situation, and a shelter-in-place program for when evacuation is not appropriate or practicable. Each resident shall receive a copy of the Safety and Evacuation Plan. The program encourages businesses to provide notification of emergencies and encourages emergency preparedness as a voluntary supplement to the notification that would be provided by local emergency response services. Taken together, these educational, disclosure, and registration/notification measures will reduce potential impacts of emergency notification and preparation to a less than significant level.

As described in PDF 6-4, the proposed zoning code will require that applicants of new residential and/or residential mixed-use development shall submit data, as determined by the Director of Community Development, for the City to evaluate compatibility with surrounding uses, including hazardous materials handling/storage.

Hazardous Air Emissions

Based on the FIND database query, there are approximately 511 regulated facilities within or in the immediate vicinity of the IBC; of these, 14 are identified as Title V facilities (see Figure 5.6-2). There are no public or private K–12 schools in the IBC; therefore, hazardous air emissions are not anticipated to impact schools as a result of project implementation. However, the project would create a mixed residential and industrial environment that may result in compatibility issues when siting residential developments within areas that could be impacted by existing facility emissions. Toxic air pollutants emitted from commercial or industrial facilities within the IBC that are at acceptable health risk levels based on their existing land use, may exceed health risk criteria in a mixed-use environment.



Based upon data obtained from the IAAs and SCAQMD's FIND database, the seven pending residential projects described in Section 3.3.3 are in close proximity to SCAQMD-permitted facilities that emit toxic and/or carcinogenic compounds.

Further evaluation of the toxic and carcinogenic air emissions would be necessary to determine the risk to project occupants. As described in the proposed zoning code, PDF 6-4 requires applicants for new residential and/or residential mixed-use development to submit data to the Director of Community Development to evaluate compatibility with surrounding uses with respect to issues such as air emissions. PDF 6-5 states that for all residential projects located within 1,000 feet of an industrial facility which emits TACs, the Project Applicant shall submit an HRA, prepared in accordance with recognized policies and procedures, to the Community Development Director prior to approval of any tentative tract map. If the HRA shows that the recognized risk and/or hazard thresholds are exceeded, the applicant will be required to identify and demonstrate that T-BACTs are capable of reducing risks and/or hazards to an acceptable level. T-BACTs may include, but are not limited to, installation of pollution control equipment at the industrial facility, or installation of MERV filters at all residential units.

Lastly, PDF 6-2 states that pursuant to the proposed zoning code related to residential disclosures, all discretionary applications for residential or residential mixed use shall include a condition of approval for disclosure to residents clearly outlining the issues associated with living in a mixed-use environment. The language for this disclosure shall be as specified by the Community Development Director.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

IMPACT 5.5-2: *VARIOUS HAZARDOUS MATERIAL SITES ARE LOCATED WITHIN THE PROPOSED PROJECT AREA. [THRESHOLD H-4]*

Impact Analysis:

Based on a review of the Environmental Data Resources database report, the project encompasses an area that includes numerous businesses that have had releases of hazardous substances to the environment and/or are undergoing environmental investigation or remediation. The identified sites include but are not limited to 173 leaking underground storage tank cases, 12 DTSC investigation/remediation cases, and 39 local agency site cleanups.

IAAs and similar studies were reviewed for each of the seven pending residential projects described in Section 3.3.3. Incompatibility issues related to contaminated soil, soil vapor, or groundwater emanating from nearby properties were not identified.

However, since there are numerous sites undergoing investigation and/or remediation within and adjacent to the IBC, the potential for impacts exists from hazardous substance contamination on or adjacent to specific project developments within the IBC. Future developments within the IBC may be impacted by hazardous substance contamination from historical operations on the project site that may pose a significant health risks. Federal, state, and local regulations referenced in PPPs 6-1, 6-2, and 6-4 through 6-8, establish measures for removing or remediating hazardous materials and wastes that might be encountered during construction. As described in PDF 6-4, the proposed zoning code requires that applications for new residential and/or residential mixed-use development shall submit data, as determined by the Director of Community Development, for the City to evaluate compatibility with surrounding uses with respect to issues including, but not limited to: noise, odors, truck traffic and deliveries, hazardous materials handling/storage, air emissions, and soil/groundwater contamination. These submittals could potentially include Phase I site assessments, groundwater studies, and other necessary documentation to help determine each project's potential for significant impacts from historical releases of hazardous substances to soil and groundwater in the IBC. As discussed in PDF 6-3, individual development sites may have existing facilities, such as transformers or clarifiers, that would need to be demolished or removed as part of a proposed development. To mitigate any hazardous materials-related impacts during the removal of such facilities, the Director of Community Development, in conjunction with OCFA, shall include specific project conditions of approval as part of the discretionary review process for the proposed development. Lastly, according to PDF 6-3, as described in the proposed zoning code related to residential disclosures, all discretionary applications for residential or residential mixed use shall include a condition of approval for disclosure to residents clearly outlining the issues associated with living in a mixed-use environment. The language for this disclosure shall be as specified by the Community Development Director. Copies of each signed disclosure shall be made available for review upon written request by the City. Although implementation of proposed projects could have a significant impact on future residents from exposure to hazardous pollutants caused by historic site uses, these potential impacts are reduced to a less than significant level through compliance with PPPs 6-1, 6-2, and 6-4 through 6-8, and PDFs 6-2 through 6-4.

IMPACT 5.6-3: *THE PROJECT SITE IS LOCATED IN THE VICINITY OF JOHN WAYNE AIRPORT AND WITHIN THE JURISDICTION OF AN AIRPORT LAND USE PLAN. [THRESHOLDS H-5]*

Impact Analysis:

Potential Hazards to Aircraft in Flight

The AELUP incorporates Part 77, Objects Affecting Navigable Airspace, of the Federal Aviation Regulations (FAR) as a guideline to describe the ultimate height of structures as defined by "Imaginary Surfaces". Structures shall not exceed the elevations defined in FAR Part 77.25 unless, upon completion of an aeronautical study conducted by the FAA, the Airport Land Use Commission finds that the structure will not adversely affect aeronautical operations. Based on the aeronautical studies, the FAA determined that structures for several projects in the IBC would not exceed obstruction

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

standards and would not be a hazard to air navigation under the FAA Part 77 regulations. These projects are: 2851 Alton Parkway, Avalon Jamboree II, Martin Street Condos, Irvine Technology Center, 16542 Millikan, and Kilroy. Although some of these aeronautical studies have expired, the project descriptions have not changed, and no new impacts are anticipated.

The aviation easement restricts the construction of buildings and/or structures into air space above 203.68 feet amsl. As described in PDF 6-1, the proposed zoning for the project related to building height limitations, recordation of aviation easements, obstruction lighting and marking, and airport proximity disclosures and signage shall be provided as required by the Orange County Airport Environs Land Use Plan for John Wayne Airport. Given the requirement for specific review by the ALUC together with the FAA determination and recorded aviation easement, and the proposed zoning for the project related to building height limitations (PDF 6-1), development of the IBC is not expected to result in an inconsistency with the building height limitations set forth under the current civilian airport standards in the AELUP.

Potential Hazards to People and Structures on the Ground

AELUP has not established Accident Potential Zones for John Wayne Airport (JWA). However, Clear Zones (also known as Runway Protection Zones) have been established at each end of JWA's runway. The southwestern part of the IBC is primarily located within the Safety Zone 6 - Traffic Pattern Zone, as defined by Table 9B of Caltrans' *California Airport Land Use Planning Handbook* (January 2002). Other zones that encroach onto the southwestern portion of the IBC from the John Wayne Airport include Safety Zone 5 - Sideline Zone, Safety Zone 4 - Outer Approach/Departure Zone, and Safety Zone 3 - Inner Turning Zone. Risk factors associated with Zone 6 generally include a low likelihood of accident occurrence. Safety Zones 3, 4, and 5 prohibit the development of children's schools, large day care centers, hospitals, and nursing homes. These zones also call for the avoidance or limited development of residential uses. Nonresidential uses having moderate or high usage intensities should also be avoided within these zones.

Types of aircraft overflying the area vary greatly and include several training operations. As discussed in *California Airport Land Use Planning Handbook*, general aviation aircraft collisions with buildings—and residences in particular—happen infrequently. However, if a collision were to occur, the consequences would depend on several variables, including the size and speed of the aircraft, the amount of fuel on board, angle of contact with the structure, and type of building construction. The proposed buildings are required to comply with state seismic standards, which are the most restrictive seismic standards in the country. Given the project's compliance with the state seismic standards, it is unlikely that the small size of general aviation aircraft would penetrate the structure of any such buildings on-site. As discussed in Section 5.11, *Public Services*, adequate fire protection services are available should an accident occur. As described in PDF 6-1, recordation of aviation easements, obstruction lighting and marking, and airport proximity disclosures and signage shall be provided, as required by the Orange County ALUP for John Wayne Airport. As a result of these design provisions and safety precautions that will be implemented, severe consequences due to aircraft collisions are not expected to occur.

The ALUC has determined that the 2851 Alton Parkway and Martin Street Condos projects are consistent with the adopted AELUP.

Portions of the IBC are located within an Airport Influence Area, which is defined as the space surrounding an airport that can be affected by airport operations. Airport Influence Areas are based on airport flight patterns that generate noise and safety issues associated with aircraft overflights. Projects that are located within an Airport Influence Area are required to comply with Assembly Bill (AB) 2776. All future projects shall comply with AB 2776, which notifies prospective buyer/renters of the existence of an airport in the area.

Finally, as described in PDF 6-2, pursuant to the proposed zoning related to residential disclosures, all discretionary applications for residential or residential mixed use shall include a condition of approval for disclosure to residents clearly outlining the issues associated with living in a mixed-use environment. The language for this disclosure shall be as specified by the Community Development Director. The disclosure form will contain a Hazardous Substance and



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Emergency Safety Plan, including a shelter-in-place plan. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreements, part of the sales literature, and part of the CC&Rs for the project.

IMPACT 5.6-4: *PROJECT DEVELOPMENT WOULD NOT AFFECT THE IMPLEMENTATION OF AN EMERGENCY RESPONSE OR EVACUATION PLAN. [THRESHOLD H-7]*

Impact Analysis:

The City has prepared an Emergency Plan to provide guidance for the City's response to emergency situations such as natural disasters, technological incidents, and national security emergencies. All new development must follow the City's emergency response and evacuation guidelines and be compatible with emergency evacuation routes. The proposed project is not expected to interfere with an adopted emergency response or evacuation plan. Individual project review by both the City's Public Safety Department and OCFA is required (see PPP 6-3). The project will incorporate all applicable design and safety requirements as set forth in the Uniform Security Code, Uniform Building Code, Fire Code, and OCFA standards and requirements. Additionally, Knox key switches for emergency vehicles, as required by the Uniform Security Code, will be installed on all gated parking structure entries. Furthermore, all construction activities will be performed per City and OCFA standards and codes, thereby avoiding any interference with emergency response or evacuation plans. As a result, no impacts are anticipated.

5.6.4 Cumulative Impacts

The assessment of potential cumulative impacts with regard to hazards and hazardous materials refers to the potential for on-site and off-site hazardous materials to have a cumulative effect on the health and well-being of project occupants. The hazardous materials study area considered for cumulative impacts consists of (1) the area that could be affected by proposed project activities, and (2) the areas affected by off-site projects where activities could directly or indirectly affect the presence or dispersion of hazardous materials onto the proposed project site. In general, only projects occurring adjacent or very close to the project site are considered to have a cumulative impact due to the limited impact area associated with releases of hazardous materials. The proposed project is consistent with a residential development and will involve the use of limited amounts of hazardous materials. In addition, the contribution of hazardous materials use and hazardous waste disposal with implementation of the project is minimal. As described in PDF-6.5-1, all projects located within 1,000 feet of facilities that emit TACs shall submit an HRA that assesses potential health risk to project occupants. These HRAs will evaluate the cumulative impact of emissions from all facilities within a 1,000-foot radius of the project site. With implementation of this study and the other PPPs and PDFs described previously, the cumulative impact of hazardous materials releases or emissions from past, present, and reasonably foreseeable projects within the City of Irvine will be less than significant.

Moreover, the proposed project would not result in an airport-related safety hazard and would not combine with other projects to result in a cumulatively considerable impact with respect to potential airport hazards. As described in PDF 6-1, the proposed zoning for the project related to building height limitations requires recordation of avigation easements, obstruction lighting and marking, and airport proximity disclosures and signage to be provided, as required by the Orange County ALUP for John Wayne Airport. As a result of these design provisions and safety precautions, severe consequences are not expected to occur. The ALUP incorporates FAA Part 77 regulations. Therefore, development of the project would not be a hazard to air navigation under the FAA Part 77 regulations or ALUP. The project is consistent with AELUP and Caltrans standards for health and safety. The proposed buildings are also required to comply with state seismic standards, which are the most restrictive in the country. Furthermore, for the proposed project and all other projects in the area subject to approval by the City of Irvine, each project is required to be consistent with the existing plans, programs, and policies related to hazards and hazardous materials. Consistency with these plans prevents this and other projects from creating cumulative impacts in terms of hazards and hazardous materials.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

5.6.5 Level of Significance Before Mitigation

Upon implementation of PPPs and PDFs listed above, the following impacts would be less than significant: 5.6-1, 5.6-2, 5.6-3, and 5.6-4.

Impact 5.6-1

Existing regulations with respect to hazardous materials abatement, transportation, and disposal, including those referenced in PPPs 6-1, 6-2, and 6-4 through 6-8, would be followed during site development and are designed to be protective of human health. In addition, PDF 6-3 would reduce risks associated with any hazardous waste impacts related to the demolition of existing facilities (e.g., transformers or clarifiers). With adherence to the PPPs and PDFs described previously, no significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous waste/materials is anticipated as a result of the proposed projects. For on-site compatibility, PDF 6-4 would require that applicants of new residential and/or residential mixed-use development evaluate compatibility with surrounding uses, including hazardous materials handling/storage. PDF 6-5 also requires residential projects located within 1,000 feet of an industrial facility which emits TACs, the Project Applicant shall ensure health risks are below significance thresholds. Therefore, compatibility of new sensitive land uses would be evaluated with respect to the surrounding environment to ensure no significant impacts would occur.

Impact 5.6-2

Federal, state, and local regulations referenced in PPPs 6-1, 6-2, and 6-4 through 6-8, establish measures for removing or remediating hazardous materials and wastes that might be encountered during construction. Potential impacts from exposure to hazardous pollutants caused by historic site uses would be reduced to a less than significant level through compliance with PPPs 6-1, 6-2, and 6-4 through 6-8, and PDFs 6-2 and through 6-4.

Impact 5.6-3

Given the requirement for specific review by the ALUC together with the FAA determination and recorded aviation easement, and the proposed zoning for the project related to building height limitations (PDF 6-1), development of the IBC is not expected to result in an inconsistency with the building height limitations set forth under the current civilian airport standards in the AELUP. As described in PDF 6-1, recordation of aviation easements, obstruction lighting and marking, and airport proximity disclosures and signage shall be provided, as required by the Orange County ALUP for John Wayne Airport. As a result of these design provisions and safety precautions that will be implemented, severe consequences due to aircraft collisions are not expected to occur. Impacts are less than significant.

Impact 5.6-4

All new development must follow the City's emergency response and evacuation guidelines and be compatible with emergency evacuation routes. The proposed project is not expected to interfere with an adopted emergency response or evacuation plan. Furthermore, all construction activities will be performed per City and OCFA standards and codes, thereby avoiding any interference with emergency response or evacuation plans. As a result, no impacts are anticipated.

5.6.6 Mitigation Measures

No mitigation measures are necessary.

5.6.7 Level of Significance After Mitigation

Implantation of PPPs and PDFs identified above would reduce potential impacts associated with hazards and hazardous materials to less than significant. Therefore, no significant unavoidable adverse impacts related to hazards have been identified.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS