

4.5 HAZARDS AND HAZARDOUS MATERIALS

This section discusses project-related issues associated with hazardous waste and the use, storage, and handling of hazardous materials at John Wayne Airport (“JWA” or “the Airport”); it also assesses the Project’s potential hazardous materials impacts that could potentially affect human health and/or the environment. The analysis in this section is based on *Phase II Environmental Site Assessment Report, General Aviation Improvement Program Areas John Wayne Airport* (Phase II Environmental Site Assessment [“ESA”]), prepared by Amec Foster Wheeler Environmental & Infrastructure (Amec, December 2016a).¹ This report is provided as Appendix F-1 to this Program Environmental Impact Report (“EIR”). In addition, eight Hazardous Material Survey Reports have been prepared evaluating the potential for hazards in the facilities that would be demolished as part of the GAIP (Amec 2017a). These reports are provided as Appendices F-2 through F-9 to this Program EIR.

The Project analysis provided below is limited as follows: the proposed Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5; it would not affect implementation of JWA’s approved evacuation plan; it would not be located in the vicinity of a private airstrip nor would it be adjacent to a wildlands area. These topics are not discussed in this section (refer to the Notice of Preparation [“NOP”]/Initial Study in Appendix A).

4.5.1 REGULATORY SETTING

Federal

Toxic Substances Control Act

The Toxic Substances Control Act of (“TCSA”) 1976 provides the U.S. Environmental Protection Agency (“USEPA”) with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including asbestos and lead-based paint which may be encountered during demolition of project buildings.

Occupational Safety and Health Act

Congress passed the Occupational Safety and Health Act (“OSHA”)(29 U.S.C. §651 et seq.) in 1970 to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (“NIOSH”) as the research institution for the OSHA. OSHA is a division of the U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. Requirements of the OSHA are

¹ Amec Foster Wheeler was acquired by Wood Group in October 2017. The Phase II site assessment and Hazardous Material Survey Reports reflect Amec Foster Wheeler as the preparers of the reports.

implemented at the state level by the California Occupational Safety and Health Administration (“Cal/OSHA”, see below).

Executive Order 12088

Executive Order (“EO”) 12088, Federal Compliance with Pollution Control Standards, was issued in 1978 and requires the head of each executive agency to ensure that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to federal facilities and activities under the control of that agency, including (among others) the Federal Aviation Administration (“FAA”).

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act administered by the U.S. Department of Transportation governs the transport of hazardous materials, such as jet fuel. The California Department of Transportation (“Caltrans”) implements the federal regulations published as Title 49 of the *Code of Federal Regulations* (“CFR”) and Title 13 of the *California Code of Regulations*. These laws regulate the handling and transport of hazardous waste materials, including any that may be found during project excavation/construction and that need to be transported offsite for disposal and/or treatment.

Federal Aviation Administration Regulation Part 139

To ensure that appropriate safety levels are met at airports, the *Code of Federal Regulations* (“CFR”, Title 14, Part 139) requires the FAA to issue airport operating certificates to airports such as JWA that serve scheduled and unscheduled air carrier aircraft with more than 30 seats. Airports are classified into one of four classes, based on the type of air carrier operations served. JWA is classified as a Class I facility because it provides air carrier operations for air carrier aircraft with more than 30 seats. To obtain a certificate, an airport must agree to certain operational and safety standards whose exact parameters vary depending on the size of the airport and the type of flights available.

JWA has been issued an airport operating certificate pursuant to Part 139 “Airport Certification” (14 CFR 139). To obtain a certificate, an airport must agree to certain operational and safety standards and provide for such things as firefighting and rescue equipment. In conjunction with its Part 139 certificate, JWA’s fuel farm is subject to inspection under the Federal Aviation Regulations (“FAR”) (14 CFR 139.321). Specifically, this can include inspection of the fuel farm and mobile fuelers, review of JWA files for documentation of quarterly inspections of the fueling facility, and review of certification from each tenant fueling agent about completion of fire safety training.

Clean Water Act

The Spill Prevention, Control and Countermeasure (“SPCC”) Rule was originally published in 1973 under Section 311(j)(1)(C) of the Clean Water Act as amended by the Oil Pollution Act of 1990. The regulation requires applicable facilities to develop and implement SPCC Plans and establish procedures, methods, and equipment requirements to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil.

40 CFR Part 112 requires that facilities subject to federal oil pollution prevention regulations develop and maintain a SPCC Plan. Federal oil pollution prevention regulations apply to facilities that have bulk oil storage or oil-filled electrical or operating equipment.

The Airport has developed a SPCC Plan, dated September 2016, which was prepared in compliance with 40 CFR Part 112 “Oil Pollution Prevention,” that outlines the requirements for both the prevention of and response to oil and oil product discharges, which in this case, is primarily jet fuel but also includes 100LL aviation fuel (“avgas”) and other petroleum-based fuels at the Airport. (The Clean Water Act is also discussed in Section 4.11, Water Quality.)

State

California Occupational Safety and Health Administration

The Cal/OSHA regulations establish state-wide requirements regarding the disturbance of Asbestos Containing Construction Materials (“ACCMs”) including removal operations for all types of ACCMs. Cal/OSHA requires contractors and employers that remove ACCMs to be registered and consultants and technicians who conduct sampling and/or removal to be certified. In addition, the agency has developed standards for general industry and the construction industry hazardous waste operations and emergency response. Cal/OSHA ensures that employers must have controls to reduce and monitor exposure levels of hazardous materials, an informational program describing any exposure during operations and the inspection of drums and containers prior to removal or opening. Decontamination procedures and emergency response plans must be in place before employees begin working in hazardous waste operations.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act (“HMRRPIA”)(California Health & Safety Code, Chapter 6.95, Article 1) was passed in 1985 and is also known as the “Business Plan Act”. It requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Business plans must include an inventory of the hazardous materials at the facility and must be updated 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 (see Orange County Fire Authority [“OCFA”]) 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 (“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 Certified Unified Program Agency (“CUPA”) (see below).

Certified Unified Program Agency

Senate Bill (“SB”) 1082 (1993) establishes the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, which consolidates, coordinates, and makes consistent six different hazardous material/waste programs. In 1997, the Orange County Environmental Health Care Agency (“OCHCA”) was designated as the Certified Unified Program Agency (“CUPA”) for the County of Orange (see discussion below under Other County Hazardous Materials Requirements).

California Environmental Reporting System

The California Environmental Reporting System (“CERS”) is the statewide web-based system that facilitates the electronic exchange of required Unified Program information among businesses, local governments and the U.S. EPA. Assembly Bill 2286 (Feuer), effective January 1, 2009, requires all Unified Program regulated businesses and local regulating Unified Program Agencies (“UPAs”), to report and submit mandatory Unified Program information electronically, through CERS or a local UPA portal. Unified Program information required to be submitted and reported electronically to CERS includes, but is not limited to, facility data regarding hazardous material regulatory activities (such as, hazardous materials business plans, site maps, and chemical inventories), underground and aboveground storage tanks, hazardous waste generation, and inspection, compliance and enforcement actions. A number of JWA facilities are listed in CERS including the Hazardous Materials Disclosure (“HMD”), Business Emergency Plan (“BEP”), and underground storage tanks (“USTs”).

National Pollutant Discharge Elimination Program

In 1972, the Federal Water Pollution Control Act (“Clean Water Act”) was amended to require National Pollutant Discharge Elimination System (“NPDES”) permits for the discharge of pollutants to waters of the United States² from any point source.³ California’s Porter-Cologne Water Quality Control Act of 1970 grants the State Water Resources Control Board (“SWRCB”) and the Regional Water Quality Control Boards (“RWQCBs”) the authority and responsibility to adopt plans and policies; to regulate discharges of waste to surface and groundwater; to regulate

² Waters of the United States include all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide and all interstate waters, including interstate wetlands (33 *Code of Federal Regulations* 328.3).

³ Point sources are discrete water conveyances, such as pipes or man-made ditches.

waste disposal sites; and to require cleanup of discharges of hazardous materials and other pollutants.

Two NPDES permits would be applicable to the GAIP. The Airport currently operates under the General Permit for Storm Water Discharges Associated with Industrial Activities (SWRCB Order No. 2014-0057-DWQ and amendment) referred to as the “Industrial General Permit”. During construction, the GAIP construction areas must comply with the SWRCB’s NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, referred to as the “Construction General Permit”. These permits are also discussed in Section 4.11, Water Quality.

Airport Land Use Compatibility Plan

The State Aeronautics Act and *California Airport Land Use Planning Handbook* identify the requirement for preparation of an airport land use compatibility plan(s) as a fundamental tool used by the Airport Land Use Commission (“ALUC”) in fulfilling its purpose of promoting airport land use compatibility. The law (Section 21675[a] of the *Public Utilities Code*) describes the compatibility plans as having two primary purposes:

- To “provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission...” and
- To “safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general”.

The ALUC for Orange County, which was established in 1970, adopted the first compatibility plan in 1975. This plan is known as the *Airport Environs Land Use Plan* (“AELUP”). The original document addressed all the airfields in Orange County. In 2002, the ALUC amended the AELUP and prepared separate compatibility plans for each facility.

The most current AELUP for JWA was adopted April 17, 2008. This plan is intended to provide land use compatibility policies for the 20-year planning horizon for JWA, to help safeguard the general welfare of the inhabitants in the vicinity of the Airport, and to help ensure the continued operation of the Airport. Specifically, the AELUP provides land use compatibility policies that seek to protect the public from adverse effects of aircraft noise, to help ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to help ensure that no structures or activities adversely affect navigable airspace. The general aviation facilities at the Airport are located within Zones 1 through 5, which have the following basic safety compatibility policies:

- Zone 1: Runway Protection Zone – Prohibits all new structures and residential uses, children’s schools, hospitals and avoids non-residential uses, unless they are very low intensity in character and confined to the sides and outer end of the area;
- Zone 2: Inner Approach/Departure Zone – Prohibits residential uses, children’s schools, hospitals, limits non-residential uses to activities that attract few people and prohibits hazardous uses (e.g., aboveground bulk fuel storage);

- Zone 3: Inner Turning Zone – Prohibits children’s schools, hospitals, avoids non-residential uses having moderate or higher usage intensities and avoids hazardous uses (e.g., aboveground bulk fuel storage);
- Zone 4: Outer Approach/Departure Zone – Prohibits children’s schools, hospitals, limits non-residential uses having moderate or higher usage intensities and avoids hazardous uses (e.g., aboveground bulk fuel storage);
- Zone 5: Sideline Zone – Prohibits children’s schools, hospitals, allows all common aviation-related activities provided that height-limit criteria are met and limits other non-residential uses having moderate or higher usage intensities; and
- Zone 6: Traffic Pattern Zone – Contains the aircraft traffic pattern which means a high possibility of accidents occurring in this zone, although the size of the zone reduces the risk level as compared to the other zones. For JWA, this zone is mainly offsite of the airport property.

Regional/Local

South Coast Air Quality Management District

The South Coast Air Quality Management District (“SCAQMD”) is responsible for monitoring and managing air quality in the South Coast Air Basin, mainly regarding stationary sources such as airport fueling stations. This is in contrast to the California Air Resources Board which deals with regulating mobile sources. In addition, SCAQMD Rule 1403 establishes asbestos survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Rule 1403 incorporates the federal asbestos requirements found in the National Emission Standards for Hazardous Air Pollutants (“NESHAP”) found in CFR Title 40, Part 61, Subpart M. USEPA delegated SCAQMD the authority to enforce the federal asbestos NESHAP and SCAQMD is the local enforcement authority for asbestos.

Orange County Fire Authority

OCFA monitors the storage of hazardous materials in the County for compliance with local requirements. Specifically, businesses and facilities which store more than threshold quantities of hazardous materials as defined in Chapter 6.95 of the California Health and Safety Code are required to file an Accidental Risk Prevention Program with the OCFA. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations.

Other County Hazardous Materials Requirements

In 1997, the Orange County Environmental Health Care Agency (“OCHCA”) was designated as the CUPA for the County of Orange. As the CUPA, the OCHCA coordinates the regulation of hazardous materials and hazardous wastes in Orange County through the following six programs: Hazardous Materials Disclosure (“HMD”), Business Emergency Plan (“BEP”), Hazardous Waste, Underground Storage Tank (“UST”), Aboveground Petroleum Storage Tank (“APST”), and the California Accidental Release Prevention (“CalARP”). These regulations include, but are not

limited to, delineation and (if necessary) remediation and disposal of ACMs and lead-based paint (“LBP”) prior to demolition of existing older structures.

4.5.2 METHODOLOGY

The evaluations of existing environmental conditions at the Project site are based on information in the Phase II ESA prepared for the Project. The potential for hazards-related impacts was based on an assessment of existing conditions and the likelihood that implementation of the GAIP would result in the disruption of existing hazardous conditions through the demolition of existing facilities or result in discharges during construction of improvements. This effort included the following: (1) documentation of the existing and historic uses at JWA; (2) JWA hazardous waste practices; (3) existing fuel handling, transport, storage facilities and activities; and (4) known discharges, investigations, and remediation activities.

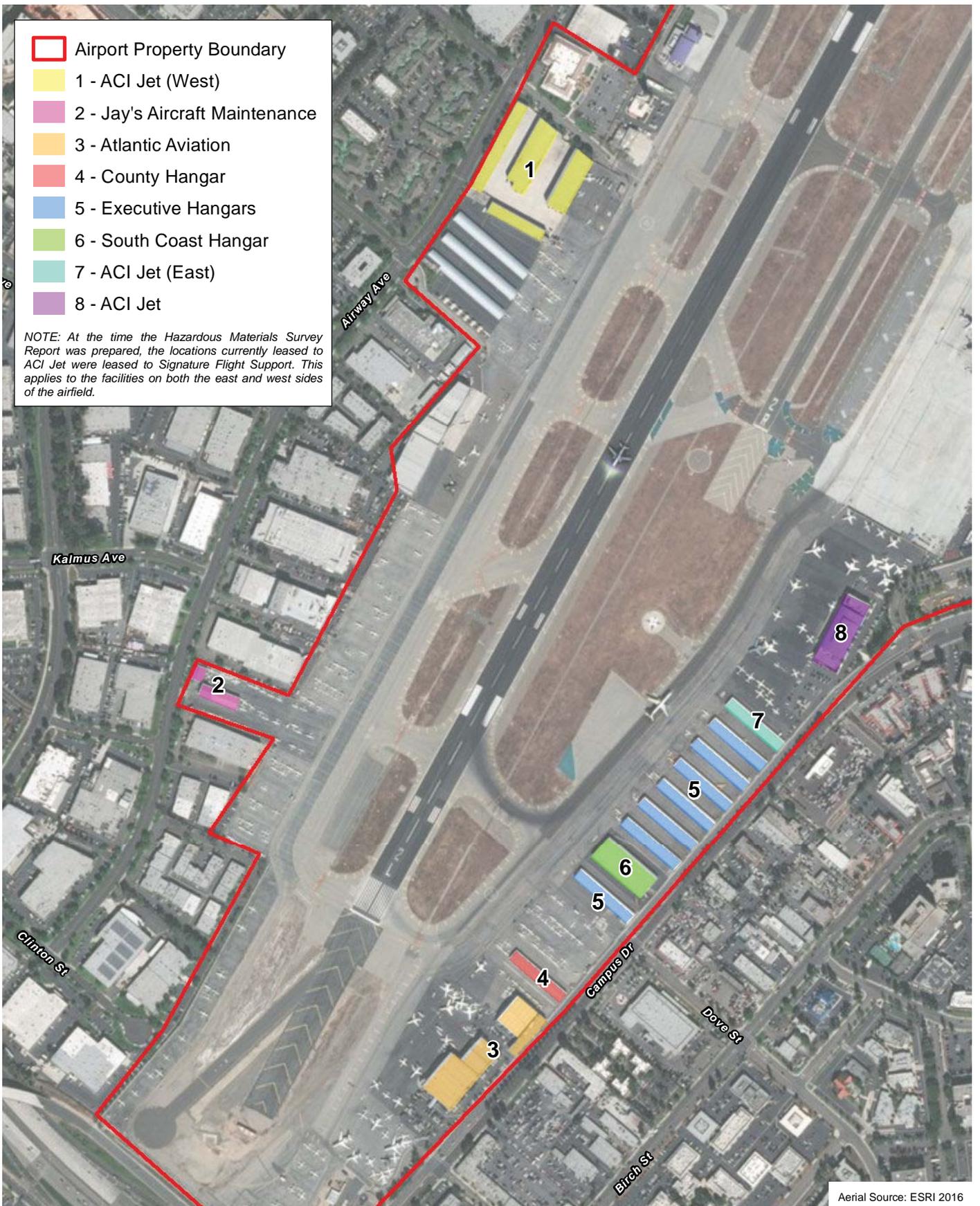
As part of the Phase II ESA, soil samples were collected from a depth of approximately 2 feet at each location and were submitted for laboratory analysis of volatile organic compounds (“VOCs”), total petroleum hydrocarbons (“TPH”), and Title 22 Metals. Soil vapor probes were placed at depth between approximately 5 and 6 feet below ground surface, and soil vapor samples were collected and submitted for laboratory analysis of VOCs and TPH. The locations of the soil testing are provided in the Phase II ESA, which is provided as Appendix F-1 to this Program EIR.

The potential for the Proposed Project to create or result in increased risk of exposing surrounding populations or the environment to hazardous materials due to operation of the GAIP was assessed in light of the following: (1) the existing fuel management programs in place at JWA, and (2) the spill prevention and response protocols. This information was obtained through review of existing documentation, consultation with Airport staff and review of results from the Phase II ESA, and Hazardous Materials Survey Reports prepared for the proposed Project site.

The Hazardous Materials Survey Reports were done in 2016 and identify the locations by the then current leaseholder. Table 4.5-1 identifies the facility name in the Hazardous Materials Survey Report and the corresponding use for the Proposed Project and Alternative 1. It should be noted, the configurations of the proposed future uses under the Proposed Project and Alternative 1 do not exactly correspond to the current lease boundaries. The locations of the facilities are depicted on Exhibit 4.5-1.

- Airport Property Boundary
- 1 - ACI Jet (West)
- 2 - Jay's Aircraft Maintenance
- 3 - Atlantic Aviation
- 4 - County Hangar
- 5 - Executive Hangars
- 6 - South Coast Hangar
- 7 - ACI Jet (East)
- 8 - ACI Jet

NOTE: At the time the Hazardous Materials Survey Report was prepared, the locations currently leased to ACI Jet were leased to Signature Flight Support. This applies to the facilities on both the east and west sides of the airfield.



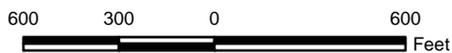
Aerial Source: ESRI 2016

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Locations Evaluated in the Hazardous Material Survey Reports

Exhibit 4.5-1

John Wayne Airport General Aviation Improvement Program



**TABLE 4.5-1
HAZARDOUS MATERIALS SURVEY REPORT LOCATIONS
AND CORRESPONDING GAIP USES**

Hazardous Materials Survey Report^a	Proposed Project Use	Alternative 1 Use
Signature Flight Support (West) ^b (F-2)	Full Service West FBO	Full Service West FBO
Jay's Aircraft Maintenance (F-3)	Limited Service Southwest FBO	Limited Service Southwest FBO
Atlantic Aviation (F-4)	Flight School and T-Hangar	Flight School and T-Hangar
County Hangars (F-5)	T-Hangars	T-Hangars
Executive Hangar (F-6)	Box Hangars	Full Service Southeast FBO
South Coast Hangar (F-7)	Box Hangars	Full Service Southeast FBO
Signature Flight Support East Hangar ^b (F-8)	Full Service Northeast FBO	Full Service Northeast FBO
ACI Jet-East (F-9)	Full Service Northeast FBO	Full Service Northeast FBO
^a The number in parentheses after the location is the appendix number where the report can be found. The name of the facility reflects the name shown on the title of the report. ^b At the time the Phase II ESA and the Hazardous Materials Survey Reports were prepared the facilities now occupied by ACI Jet were leased to Signature Flight Support. Therefore, the reports for the facilities on west sides of the airfield and the hangar on the east side reference the facilities as being operated by Signature Flight Support. These reports are contained in Appendices F-1, F-2 and F-8, respectively). An additional Hazardous Materials Survey Report was prepared at a later time for the ACI Jet facility on the east side of the Airport, which reflects ACI Jet as the leaseholder (i.e., the report contained in Appendix F-9).		

4.5.3 EXISTING CONDITIONS

Hazardous Materials Use

Airport activities involve the use, handling, storage, transport, and disposal of hazardous materials and/or wastes that are subject to federal, state, and local laws and regulations. A hazardous material is any item or agent that can pose a danger to individual health and to the environment. The term generally applies to certain raw materials or products purchased from outside suppliers that are stored and used at a facility (AECOM 2018a). Hazardous and regulated materials found at the Airport are listed with the CERS. Information found in CERS includes facilities that handle hazardous materials, site maps, chemical inventories, underground and aboveground storage tanks, and emergency response plans.

The main activity conducted at the Airport that involves the use, storage, and handling of hazardous materials is the fueling of aircraft, airport vehicles, and other ground support equipment ("GSE"). Only minor maintenance and repairs of commercial aircraft and airport vehicles are allowed at the Airport, thereby reducing the number and quantities of other hazardous materials as well as their potential impacts.

Fuel Handling and Storage

As previously discussed in Section 3.0, *Project Description*, aviation fuel is a specialized type of petroleum-based fuel used to power and propel aircraft. The general aviation activities at the Airport use two types of aviation fuel: avgas and Jet A. Both types of fuels are stored at the

Airport. Avgas is the only remaining lead-containing transportation fuel. Lead has been found to be a toxic substance, and several petitions and lawsuits are demanding the U.S. Environmental Protection Agency (“USEPA”) pursue an endangerment finding for leaded avgas. The agency is expected to make a final determination on avgas in 2018. Replacement of aviation gasoline (“avgas”) by 2018 is anticipated through the Piston Aviation Fuels Initiative (“PAFI”) (AECOM 2018a).

The Airport has two “fuel farm” locations. All existing fuel tanks at JWA, including those in the commercial fuel farm and old fuel farm, meet current mandated leak protection and detection standards. The larger facility, built in 1991, serves the commercial airlines and is operated by Aircraft Service International Group (“ASIG”) for a consortium of airlines (“SNAFuel, Inc.”). Currently, the commercial carriers receive fuel on the commercial apron from the fuel farm located on the west side of the Airport via underground pipes connected to the apron fuel hydrants. The hydrant fueling system extends to the “remain overnight” (“RON”) parking apron for commercial aircraft located south of the passenger terminal building. SNAFuel provides Jet-A fuel to the commercial aircraft.

The “old” fuel farm is located in the southeast corner of the airfield and is operated by the Fixed Based Operators (“FBOs”) and the Airport for general aviation. The underground fuel tanks located at the southeast fuel farm include Jet-A, avgas, regular unleaded gasoline, and diesel. General aviation aircraft fueling services are currently provided by the two full-service FBOs at the Airport. General aviation aircraft are fueled at their parking spaces and tie-downs via trucks operating from the old fuel farm. All areas where fuel is stored and where aircraft and vehicles/GSE are fueled drain into Petro-pack equipped oil/water separators. Fuel is delivered to the general aviation fuel farm through the gate off Campus Drive at Quail Street. The current general aviation fuel storage facilities, which are in addition to fuel trucks, range in size from 750 gallons to 5,000 gallons, and are as follows:

- One 20,000-gallon underground tank of avgas operated by the current Full Service Southeast FBO
- One 12,000-gallon underground tank of unleaded operated by the current Full Service Southeast FBO
- One split underground tank with 8,000 gallons of avgas and 4,000 gallons of unleaded/motor gas to service own vehicles and some airline equipment operated by the current Full Service Northeast FBO
- One 20,000-gallon underground tank of Jet-A fuel operated by the current Full Service Southeast FBO
- Two 30,000-gallon underground tanks of Jet-A fuel operated by the current Full Service Northeast FBO (AECOM 2018a).
- One 2,500-gallon underground tank of diesel fuel owned and operated by the Airport
- One 6,000-gallon underground tank of unleaded fuel owned and operated by the Airport

In 2016, approximately 96 percent of the total fuel sales (by volume) for general aviation activities at Airport was of Jet-A (AECOM 2018a). Avgas sold at the Airport has decreased from over 6 percent of the total fuel flowage in 2006 to only 3.3 percent in 2016. The continuous

decline in avgas demand is generally in line with the decrease in based piston aircraft. However, the drop in fuel price since late 2014 has ceased the decline, and the demand for avgas has remained steady. An estimated total of 7,604,000 gallons of fuel was used at the Airport in 2016. The following provides the approximate breakdown of the fuel usage by fuel type (AECOM 2018b):

- 254,000 gallons of avgas
- 7,290,000 gallons of Jet-A
- 60,000 gallons of other fuel

All personnel conducting fueling activities at the Airport are required to receive training from the Orange County Fire Authority (“OCFA”) that is approved by the FAA. Furthermore, all fueling operations are subject to Emergency Response, Spill Response, and Storm Water Pollution Prevention Plan (“SWPPP”) compliance, among others. These plans must meet the approval of the OCFA, JWA, and County and State health and water quality officials (i.e., the Regional Water Quality Control Board [“RWQCB”]).

The current *JWA Spill Prevention, Control, and Countermeasure* (“SPCC”) Plan, dated September 2016 (Amec 2016b) and prepared in compliance with 40 CFR Part 112 “Oil Pollution Prevention,” outlines the requirements for both the prevention of and response to oil and oil product discharges, which in this case, includes jet fuel, avgas, diesel, and unleaded gasoline. JWA has also prepared an Operations Manual to encompass all aspects of fueling operations specific to the JWA fuel farm that applies to member airlines. Non-member airlines must execute an agreement to incorporate the Manual into their operations in its entirety.

All fueling facilities have permits from the above-listed agencies to operate, as well as appropriate permits from the South Coast Air Quality Management District (“SCAQMD”) regarding fuel-related emissions.

In addition to the above listed facilities, the County of Orange has approved a privately-initiated proposal by Wickland Pipelines LLC (“Wickland”) to supply Jet-A fuel to the Airport that would result in other improvements to the west side fuel farm and would include construction of two 1.5-million-gallon capacity tanks and connection of these large tanks with an underground pipe to a larger off-site pipeline distribution system, in order to increase Airport-related jet fuel storage capabilities and provide for delivery of Jet-A via pipeline.⁴ The intent of this approved project is to reduce/remove the need to truck fuel from the refinery to the Airport, thus reducing potential impacts due to transport and handling of jet fuel (JWA 2016). These facilities are under construction but not currently operational. It is anticipated that these facilities will be completed by the end of 2018.

Spill Management and Releases

JWA’s spill management procedures are documented in JWA’s SPCC and the SPCCs of the Airport tenants, JWA’s SWPPP as well as the Emergency Plans submitted to CERs. In the event of fuel spills, the on-site Airport Rescue and Fire Fighting (“ARFF”) Station is notified and called to the

⁴ The tank system would consist of two 98-foot diameter by 34-foot high tanks. Each jet fuel tank would have a total shell capacity of 1,806,000 gallons and a net operating capacity of 1,554,000 gallons.

scene for all fuel spills. Tanker truck and into-plane (fuel dispensing) operators are primarily responsible for clean-up and containment; however, ARFF personnel intervene to prevent a fire, contain the spill, and/or prevent spilled fuel from entering the storm drain system. Small spills are cleaned up using absorbent pads and materials stored at the fuel farm and the commercial apron. In the event of a major spill, the OCFA Hazardous Materials Response Team is called to the scene. Clean-up and further containment is the responsibility of the fuel farm, FBOs, and into-plane operators who contract with various spill response companies. JWA also has spill response contractors available on-call 24 hours a day, 7 days a week.

Historically, a number of small fuel spills have occurred throughout the airfield but rarely result in releases to the storm drain or off the property. Between 2003 and 2016, JWA recorded no fuel spills or other incidents that resulted in releases that extended off the airfield. (McCoy 2018). All minor spills were contained and properly remediated. No incidents required treatment, removal, or disposal of contaminated soils. All releases were effectively remediated (i.e., cleaned up) and regulatory case files have been closed regarding these incidents. Therefore, these past incidents represent no significant impact on the environment regarding hazardous materials. In 2016, JWA conducted an assessment of the airfield, focusing on the GAIP areas to evaluate the subsurface for the presence of contaminated soils that may impact redevelopment. The study included a review of historic records and sampling of areas with the potential for contamination as well as statistical soil sampling of non-suspect areas to test for the presence of contaminated soils. No contaminate concentrations in excess of accepted Department of Toxic Substance Control (“DTSC”) risk-based screening values or other environmental screening levels were detected in the assessment study (AMEC, 2016a).

The 2016 Annual Operators Report for the hydrant fueling facilities did not identify any outstanding issues. The following is a brief overview of their report to the Airport (SNAFuel 2016):

- All required permits are on hand and are current.
- All fuel received into and dispensed from the facility met American Society for Testing and Materials (“ASTM”) D1655 standards.
- No significant fuel spills occurred in 2016.
- The fuel facility operation maintained International Organization for Standardization (“ISO”) 9001-2008 certification.
- All personnel are fully trained in accordance with corporate, county, and federal regulations (“OSHA”). All outside training for FAR 139, Hazardous Waste Operations and Emergency Response (“HAZWOPER”), Confined Space Entry, and Hazardous Material Shipping are current.
- The facility has retained an ISO 9001:2008 certification.⁵

⁵ ISO 9001:2008 specifies requirements for a quality management system where an organization (1) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements and (2) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All requirements of ISO 9001:2008 are generic and are intended to be applicable to all organizations, regardless of type, size and product provided (ISO 2018).

The Airport's compliance with applicable regulatory requirements as well as the stringent fuel safety protocols routinely implemented ensure the risks related to jet fuel transport, storage, and handling are minimized to the maximum extent possible.

Two locations on the Airport are associated with historic contamination. In the late 1980s and early 1990s, multiple JWA FBO tenants with jet fuel tanks at the old fuel farm declared bankruptcy and left JWA to clean up releases of jet fuel to the soil and groundwater. In 1988, the RWQCB issued Cleanup and Abatement Order 88-123 to JWA, and the remediation is still ongoing. Annual ground water sampling as well as monthly visual observations and free-product removal are performed at this location. Contamination was also identified for the former Fire Station 33 (366 Paularino Avenue). Annual groundwater monitoring is conducted at this location. Annual reports to the RWQCB are prepared for both of these facilities as part of the regulatory oversight. The most recent annual reports for each of these sites are dated January 29, 2018, for reporting year 2017 (McCoy 2018).

Maintenance Activities

Hazardous wastes generated during the maintenance of aircraft typically include shop waste such as used oil, transmission and hydraulic fluids, and other industrial waste such as oily rags, spent cartridges, etc. Shop wastes are stored in approved containers until they are transported and properly disposed of. Airport maintenance building operations include the limited use of small quantities of paints, mineral spirits, batteries, cleaning solvents, and petroleum products. Maintenance services at existing hangars store materials used to maintain aircraft, fueling, and vehicles and house containers used for oil, coolant or waste oil, or fuel.

Operations conducted in aircraft hangars, maintenance facilities, and associated shops include cleaning, reconditioning, and overhauling aircraft. These activities involve hazardous materials storage and waste management. Hazardous materials and wastes found in aircraft maintenance facilities, aircraft systems, aircraft servicing and components shops most commonly include: fuels and solvents and can also include lubricants, cleaners, paints, compressed gasses, peroxides, caustics, alcohols, and foams. These materials are used for many activities including aircraft maintenance and repairs, painting and stripping, fueling and storage, as well as washing and cleaning aircraft and ground service equipment. Small quantities of oil, degreaser, paint, paint thinner, alcohol, acetone, varsol alcohol, transmission fluid, and gear oil can be stored in hangars (AECOM 2018a).

The Airport sends the waste oil and solvent generated by its tie-down tenants out to be recycled. All waste generated by airport maintenance activities is also sent out for recycling or proper disposal. Commercial airlines and FBOs contract individually with waste hauling companies for the collection of, recycling, or proper disposal of hazardous and California-regulated waste.

All the existing tanks at JWA meet mandated leak protection and detection standards. Similarly, oil/water separators, located at wash-racks near aircraft maintenance facilities, are routinely cleaned and monitored (see Exhibit 4.11-1 in Section 4.11, Water Quality for the location of the oil/water separators). Hazardous materials use and disposal practices include the ongoing implementation of employee training programs.

Aviation-related hazardous materials storage and waste management is a function of the type and size of the aircraft hangar and the work performed. Functional space requirements for

hazardous materials storage and waste management are directly related to the identity, operation, and volume of the substance(s) and include: (1) T-Hangars (assume very minor maintenance activities are permitted or none at all); (2) Conventional/Box Hangars (assume routine aircraft inspection and maintenance activities are permitted, or none at all); and (3) Full Service would provide maintenance, repair, and overhaul (“MRO”) (assume licensed provider operating in compliance with all applicable laws, regulations, and permit requirements, i.e., FAA, the California Division of Occupational Safety and Health Administration [“Cal/OSHA”], Federal Resource Conservation and Recovery Act [“RCRA”], etc.). No dedicated hazardous materials space may be provided in hangars used only for storing transient aircraft because no services are performed on the aircraft, while hangars used for storing based aircraft may have a small fire-rated room or cabinet/locker to store the supplies needed to self-perform routine inspection and minor maintenance of the aircraft, systems, and components (to the extent permitted by the airport, lease agreement, or applicable code requirements) (AECOM 2018a).

Schools Surrounding the Airport

At its closest point, Mariner’s Christian School, located at Red Hill Avenue and Fisher Avenue, is approximately ¼-mile west of the Airport. No other school facilities are within the ¼-mile area surrounding the Airport.

Site Investigations

Phase II Environmental Site Assessment

Amec conducted a Phase II ESA dated December 14, 2016, to assess shallow subsurface conditions in the planned General Aviation Improvement Program (“GAIP”) development/redevelopment areas at JWA. These surveyed areas included hangar and tie down areas operated by the County of Orange (County) and tenant leaseholds being evaluated as part of the GAIP.

As described in the Phase II ESA, which is provided as Appendix F-1 to this Program EIR, numerous environmental assessments have been conducted at JWA and have included collection of soil, soil vapor, and groundwater data. Boring locations to spatially distribute the sampling data within and outside the Project footprint were based on the potential future buildings and general operation areas, demolition areas, and replacement of hangars. The Phase II ESA identified and marked subsurface features (i.e., common or expected features based on utility drawings and/or surface indicators) during the geophysical survey. No anomalies (i.e., unusual or unexplainable features) were identified during the geophysical survey. Geologic materials encountered at the site consist of interbedded and relatively fine-grained sediments including silty sand and sandy silt underlying the pavement materials to a depth of approximately 6 feet. No visual or olfactory indicators of petroleum hydrocarbons or VOCs were observed in the soils encountered in any of the borings. Groundwater was not encountered during hand augering (Amec 2016a).

No significant impacts to soil or soil vapor were observed during field work or detected by laboratory analyses of samples. All reported TPH concentrations were well below published environmental screening levels (“ESL”) values for the commercial/industrial construction worker exposure scenario. Where detected, the VOC concentrations reported in soil were below

their respective industrial regional screening levels (“RSLs”) and/or Department of Toxic Substances Control (“DTSC”) alternate risk-based screening values. Concentrations of metals detected in soil samples were not considered significant. Similar to the soil sampling results, relatively sporadic and low concentrations of VOCs were reported in soil vapor samples, and concentrations reported in soil vapor were below their respective industrial RSLs and/or DTSC alternate risk-based screening values (Amec 2016a).

Hazardous Materials Survey

Amec also performed site-specific survey work and prepared Hazardous Materials Survey Reports that included existing facilities being evaluated as part of the GAIP. The site survey included an assessment of suspect asbestos-containing materials (“ACM”) and lead-based paint (“LBP”).⁶ These studies, which provide detailed sampling descriptions and the analytical results, are provided in Appendices F-2 through F-9 of this Program EIR and are summarized below.

Asbestos-Containing Materials

The regulatory definition of an ACM is any material containing more than 1 percent asbestos. (i.e., materials with less than 1 percent asbestos are not considered ACMs). The DTSC classifies asbestos containing material as a hazardous waste if it is “friable” and contains 1 percent or more asbestos (a friable material is one that can be reduced to a powder or dust under hand pressure when dry). In contrast, the DTSC considers non-friable bulk asbestos-containing waste to be non-hazardous regardless of its asbestos content. Friable ACMs must be removed and disposed of by licensed contractors that must adhere to the laws and regulations regarding ACMs. The *California Business and Professions Code* requires asbestos abatement contractors to be licensed by the Contractors State License Board (“CSLB”) and asbestos consultants to be certified by Cal/OSHA. The Cal/OSHA asbestos standard contained in Title 8, CCR Section 1429 defines ACCM as any manufactured construction material that contains more than one-tenth of 1 percent (>0.1percent) asbestos (Amec a-g 2017). The only two sites that required point count analyses were required to confirm asbestos content of samples with initial results of reported at less than 1 percent were the Executive Hangars and Atlantic Aviation. As discussed below, the point count analysis at these two locations was conducted as part of the GAIP evaluation.

Signature Flight Support (West) (currently ACI Jet)

Of the 406 samples tested, asbestos was not detected in amounts measuring greater than 1 percent, therefore, they are not considered ACMs and remediation is not required (Amec 2017a, Appendix F-2).

Jay’s Aircraft Maintenance

Of the 70 sample layers analyzed, asbestos was not detected in amounts measuring greater than 1 percent in any of the samples so no remediation is required (Amec 2017b, Appendix F-3).

⁶ The Hazardous Materials Survey Reports were prepared pursuant to the regulatory requirements in the Cal/OSHA asbestos standard contained in Title 8, CCR Section 1429 and Cal/OSHA lead-related requirements articulated in 8 CCR 1532.1 and 17 CCR 3600 et seq.

Atlantic Aviation

As part of the Hazardous Materials Survey, 470 samples were collected and 764 sample layers were tested for asbestos content. Based on the analyses, asbestos measuring greater than 1 percent was reported in some components (e.g., floor tiles, joint compound, and ceiling and wall texturing material) of two of the four buildings (NP2 and NP4). In addition, asbestos was reported in amounts less than 1% in thirteen samples that included joint compound, plaster, cove base mastic, and stucco. These samples were subsequently analyzed by point counting and asbestos was reported with an amount greater than 0.1% in only one sample of joint compound in Building NP4. The identified ACMs will require remediation before building demolition (Amec 2017c, Appendix F-4).

County Hangars

Ten sample layers were analyzed for asbestos content, and asbestos was not detected in amounts greater than 1 percent in any of the samples. Therefore, no remediation is required (Amec 2017d, Appendix F-5).

Executive Hangars

Of the 141 sample layers analyzed for asbestos content, asbestos was measured in amounts greater than 1 percent in joint compound, floor tile and associated mastic, and remnant floor mastic. In addition, asbestos was identified in amounts less than 1% in six samples of cove base mastic. Based on analysis of the cove base mastic samples by point counting, asbestos was not reported in amounts greater than 0.1% in any of the samples. The identified ACMs will require remediation before building demolition (Amec 2017e, Appendix F-6).

South Coast Hangar

Of the 254 sample layers analyzed for asbestos content, asbestos was measured in amounts greater than 1 percent in the brown sheet vinyl backing with a terrazzo pattern. Approximately 82 square feet of the sheet vinyl is in restrooms in Hangars 1 and 6. The identified ACMs will require remediation before building demolition (Amec 2017f, Appendix F-7).

Signature Flight Support (East Hangar) (currently ACI Jet)

Of the 80 sample layers analyzed, asbestos was measured in amounts greater than 1 percent in joint compound and the mastic associated with the beige floor tile in the restrooms. The identified ACMs will require remediation before building demolition (Amec 2017g, Appendix F-8).

ACI Jet (East)

Of the 362 sample layers analyzed, asbestos was identified in amounts greater than 1 percent in four of the roof penetration mastics on the north and south wing and in the curb and patch mastic on the roof on the north wing. The identified ACMs will require remediation before building demolition (Amec 2018, Appendix F-9).

Lead-Based Paint

The U.S. Department of Housing and Urban Development (“HUD”), EPA, and California definitions for LBP are any paint with a lead concentration equal to or greater than 1.0 milligram per square centimeter of surface area (≥ 1 mg/cm²) when measured by a portable x-ray fluorescence (XRF) spectrum analyzer, or 0.5 percent by weight (5,000 parts per million [ppm]) when measured by standard analytical methods. All LBP above regulatory thresholds require removal from structures and disposal in accordance with local, State, and federal regulations prior to renovation or demolition activities that would affect structures that contain LBP or adjacent soils. As noted herein, XRF measurements were also taken on ceramic tiles, where present, in building structures. Although some of the ceramic tile material indicated potential presence of lead, the tiles were not sampled for laboratory analysis because the ceramic tiles are not considered a painted surface or LBP (with the exception of the Signature Flight Support East Hangar [currently ACI Jet] where a chip from damaged tile was collected and analyzed). Where potential presence of lead is noted herein for ceramic tiles based on XRF data and/or where LBP has been confirmed based on laboratory analyses, Cal-OSHA will require a negative exposure assessment before renovation or demolition (Amec 2017a-g).

Signature Flight Support (West) (currently ACI Jet)

None of the tested building paints are considered LBP based on the XRF results, and all were identified as being in intact condition. However, several walls in Hangar 1 and 3 returned results that were elevated above the low levels observed on other similar materials. In addition, ceramic tile glaze from Hangar 1 and 3 returned elevated results; however, the ceramic tile was not sampled for laboratory analysis because it is not an LBP. Based on the results of the XRF survey, one representative paint chip sample of suspect LBP was obtained from Hangar 3, Room 5 north wall. After testing, the sampled paint was found not to be LBP (Amec 2017a, Appendix F-2) and no remediation is required.

Jay’s Aircraft Maintenance

None of the tested building paints would be considered LBP based on XRF testing. Because none of the paint was considered to have elevated XRF results, no samples were obtained (Amec 2017b, Appendix F-3) and no remediation is required.

Atlantic Aviation

Except for the stringer for the stairs in the lobby and ceramic tiles in one of the buildings, none of the tested building paints or coatings would be considered lead-based. The paint on the stringer was found in an intact condition. Samples were collected from readily accessible, representative paint-coated surfaces that were suspected to contain lead. Ten paint chip samples were analyzed for the presence of lead, and all were found to be LBP except for the blue paint on the exterior of the door in Suite 18/Room 36 of Building NP4 (Amec 2017c, Appendix F-4, which includes diagrams of locations). The paint found to be LBP will require remediation by a licensed contractor before demolition of the building.

County Hangars

None of the tested building paints would be considered LBP based on the XRF results, and all were identified as being in intact condition. However, the red paint on the frame in this structure is typically suspect paint. Therefore, based on the XRF results, one paint chip sample was analyzed for the presence of lead and was found not to be LBP (Amec 2017d, Appendix F-5) and no remediation is required.

Executive Hangars

None of the tested building paints are considered LBP based on the XRF results, and all were identified as being in intact condition except for paint peeling from the structure in Hangar 62 and the restrooms. The paint on the floor of Hangar 62 returned results that were elevated above the low levels observed on other similar materials. Several readings on the sheet metal and structural members were slightly elevated. In addition, ceramic tile glaze in the restrooms returned elevated results; however, the ceramic tile was not sampled for laboratory analysis because it is not an LBP. After testing of paint chip samples, the paint on the floor of Hangar 62 was found to be LBP (Amec 2017e, Appendix F-6) and will require remediation before demolition of this building.

South Coast Hangar

None of the tested building paints would be considered LBP via XRF testing. Since none of the paint was considered to have elevated XRF results, no samples were obtained (Amec 2017f, Appendix F-7) and no remediation is required.

Signature Flight Support East Hangar (currently ACI Jet)

None of the tested building paints would be considered LBP based on the XRF results, and all were identified as being in intact condition. However, the paint on the south wall in the restroom in the building at 19341 Campus Drive returned XRF results that were elevated above the low levels observed on other similar materials. In addition, ceramic tile glaze in the restroom returned elevated results. Therefore, two paint chips and one ceramic tile sample were analyzed for the presence of lead. None of the paint was LBP, and the ceramic tile was not greater than 0.5 percent (Amec 2017g, Appendix F-8), so no remediation is required.

ACI Jet (East)

None of the tested building paints would be considered lead-based paints based on XRF results. Therefore, no samples were collected for laboratory analysis. Surface coating, readings of ceramic tiles were also taken, but XRF readings showed no elevated results; and therefore, did not warrant sampling for laboratory analysis (Amec 2018, Appendix F-9) and no remediation is required.

4.5.4 THRESHOLDS OF SIGNIFICANCE

In accordance with the County's Environmental Analysis Checklist and Appendix G of the State CEQA Guidelines, the Project would result in a significant impact to hazards and hazardous materials if it would:

Threshold 4.5-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Threshold 4.5-2 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

Threshold 4.5-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school

4.5.5 REGULATORY REQUIREMENTS AND STANDARD CONDITIONS OF APPROVAL

Implementation of the GAIP assumes compliance with existing regulations related to hazards and hazardous materials, as discussed under Section 4.5.1, Regulatory Setting, above. These include the Regulatory Requirements (RR) and Standard Conditions of Approval (SC) listed below:

RR HAZ-1 Prior to the start of demolition or construction at the facilities, an asbestos abatement work plan shall be prepared in compliance with federal, State, and local regulations for any necessary removal and disposal of such materials, (including, but not limited to, 40 CFR 61 Subpart M, Occupational Safety and Health Administration 8 CCR 1529, and South Coast Air Quality Management District Rule 1403) and shall include: (1) demolition plans and specifications incorporating any necessary abatement measures for the removal of materials containing asbestos or assumed to contain asbestos in compliance with federal, State, and local regulations; (2) A licensed California Department of Occupational Safety and Health contractor, certified by the CSLB and registered with Cal/OSHA shall perform all "asbestos-related work" that disturbs asbestos-containing materials or asbestos-containing construction materials at the facilities; (3) All persons who may come into contact with any asbestos-containing material during demolition, construction, and maintenance at the facilities shall be notified in writing to avoid removal or disturbance of the asbestos-containing material; (4) any suspect material not identified but assumed to contain asbestos disturbed during the course of demolition shall require a cease work order and examination by a California Department of Industrial Relations Division of Occupational Safety and Health certified asbestos consultant; (5) all known asbestos-containing material or asbestos-containing construction material, to the extent that the asbestos-containing material or asbestos-containing construction material becomes friable, must be removed prior to demolition; and (6) asbestos-containing waste material that is generated during demolition at the facilities

shall be properly handled and disposed of in compliance with applicable federal, State, and local regulations.

RR HAZ-2 Prior to the start of any construction/demolition at the facilities, a lead-based paint/lead-containing paint abatement work plan shall be prepared in compliance with federal, State, and local regulations (including, but not limited to Occupational Safety and Health Administration CCR Title 17 Section 37000-37100 and Title 8 Section 1532.1 and South Coast Air Quality Management District Rule 301) for any necessary removal and disposal of such materials.

The work plan implementing these regulations shall also include the following elements as per the Hazardous Materials Survey Report: (1) demolition plans and specifications shall incorporate any necessary abatement measures for the removal of materials containing lead-based paint and/or lead-containing paint in compliance with federal, state, and local regulations; (2) paints identified as lead-based and in poor condition (peeling or chipped) and all loose, flaking, or otherwise deteriorated lead paint shall be stabilized prior to any other construction-related activity and/or demolition on site. The stabilization process must be completed by California Department of Public Health Certified Workers under a California Department of Public Health Certified Supervisor, and all loose and flaking paint shall be removed from all work areas; (4) lead-based paints, i.e., paint on the floor of Hangar 62, in good condition may be left in place if exposure to employees and the environment is controlled and the lead-containing waste is properly tested and disposed based on the test results; (5) compliance with recommendations contained in a negative exposure assessment, which has been prepared meeting Cal-OSHA standards, for the appropriate handling of materials tested, via XRF, and found to contain lead in amounts that may be a source of exposure to workers or may not meet testing limits for disposal including ceramic tiles in the restrooms prior to renovation or demolition; and (6) work area preparations as well as adequate worker protection and employee exposure monitoring and material testing as it relates to disposal will be required during any equipment demolition activity.

RR HAZ-3 All transportation of hazardous materials at the facilities is regulated at the federal (Title 49 of the *Code of Federal Regulations* ["49 CFR"]) and State (Title 13 of the *California Code of Regulations* ["13 CCR"]) levels and requires compliance with all applicable federal, State, and local regulations pertaining to hazardous materials to ensure that the risk associated with the use and storage of the materials, after transport to JWA, is minimal. All hazardous materials shall be handled in full compliance with applicable requirements, and the necessary permits maintained by JWA. Carriers responsible for the transportation of hazardous materials are required to have a hazardous materials transportation license, issued by the California Highway Patrol ("CHP"). All fuel deliveries from suppliers within California will comply with all applicable requirements of the CHP's biennial inspection of terminals ("BIT") program.

RR HAZ-4 Per USEPA requirements, a *Spill Prevention, Control, and Countermeasure Plan* is required to address all fueling related activities. Pursuant to 40 CFR Section 112,

physical modifications to fueling facilities (i.e., the extension of the hydrant fueling system) may require a technical amendment to a SPCC Plan.⁷ Should SNAFuel, the operator of the hydrant fueling system, agree to extend the system to the East Full Service FBO(s), the JWA Environmental Engineer shall determine if an amendment to the SNAFuel SPCC Plan is required. Said amendment, if determined necessary, would be prepared in compliance with the requirements of the U.S. Environment Protection Agency as provided for in 40 CFR Section 112 to the satisfaction of the JWA Environmental Engineer.

RR HAZ-5 A *Spill Prevention, Control, and Countermeasure Plan* or an amendment to an existing SPCC may be required to address the additional fueling related activities Prior to construction of the self-service fueling station. The JWA Environmental Engineer shall determine if an amendment to an existing SPCC Plan or a new plan is required. Prior to the self-serve fueling station becoming operational, said document, would be prepared in compliance with the requirements of the U.S. Environment Protection Agency as provided for in 40 CFR Section 112 to the satisfaction of the JWA Environmental Engineer.

SC HAZ-1 Prior to the issuance of a building permit for installation of an industrial oven, spray booth, powder-coating operation, dust collection equipment, welding operation, refrigeration system, or other hazardous equipment, the applicant shall provide the Manager, Permit Services with a clearance from OCFA, or other Local Fire Agency (if applicable), indicating plan compliance with Fire Code and all guidelines specific to the operation. (County Standard Condition FP02)⁸

SC HAZ-2 Prior to the issuance of a grading permit or building permit, whichever comes first, for installation of an aboveground or an underground tank used for the storage of flammable, combustible, or hazardous liquids, the applicant shall provide the Manager, Permit Services with a clearance from OCFA indicating compliance with Guideline G-08.⁹ (County Standard Condition FP12)

SC HAZ-3 A. Prior to the issuance of a building permit, the applicant shall provide the Manager, Permit Services with a clearance from OCFA, or other Local Fire Agency (if applicable), indicating compliance with Guideline G-06.¹⁰

B. Prior to the final inspection approval, the applicant shall provide the Manager, Permit Services with a clearance from OCFA, or other Local Fire Agency (if

⁷ The need for a technical amendment to the Plan requires engineering judgment. Examples of when a technical amendment is required includes, but is not limited to, the replacement, reconstruction, or installation of oil transfer piping systems. Oil is defined to include any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil. (Wood 2016 [definition taken from 40 CFR Section 112.2 – Definitions])

⁸ This is a County Standard Condition of Approval; therefore, the wording has not been changed from the text of the adopted condition. However, it should be noted the lease agreements do not permit all these activities to occur on the Airport.

⁹ Guideline G-08 is an OCFA document titled *Installation and Modification of Aboveground Equipment Components of Fuel Dispensing Operations*. The current version is dated January 1, 2017.

¹⁰ Guideline G-06 is an OCFA document titled *Completion of the Chemical Classification Packet*. The current version is dated January 1, 2017.

applicable), indicating a “Hazardous Materials Disclosure Chemical Inventory and Business Emergency Plan” packet has been submitted to the OCFA for review and approval. (County Standard Condition FP15)

SC HAZ-4 Applicant/operator shall store, manifest, transport, and dispose of all on-site generated waste that meets hazardous materials criteria in accordance with the *California Code of Regulations* Title 22 and in a manner to meet the satisfaction of the Manager, Health Care Agency (“HCA”)/Hazardous Materials Program. Applicant shall keep storage, transportation, and disposal records on site and open for inspection by any government agency upon request. Applicant shall store used oil filters in a closed, rainproof container that is capable of containing all used oil and shall manage the container as specified in Title 22, Chapter 30, Division 4, Section 66828 of the *California Code of Regulations*. (County Standard Condition RC02)

4.5.6 IMPACT ANALYSIS

Thresholds 4.5-1 and 4.5-2

- *Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- *Would the Project 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?*

Proposed Project

Short-Term Construction Impacts

The Proposed Project would result in a variety of demolition, relocation, and construction activities; and all improvements would be confined to the existing Airport footprint (i.e., no expansion of the general aviation uses beyond the current Airport limits). The demolition and construction activities would involve the use, storage, and handling of hazardous and non-hazardous materials as well as the generation of hazardous waste. Additionally, hazardous materials such as asbestos-containing materials and lead-based paint may be encountered during demolition and relocation activities associated with the Proposed Project.

Based on the Hazardous Materials Survey Reports prepared for the existing general aviation facilities, the facilities located where a portion of the box hangars, flight school facilities, and a portion of the proposed T-Hangars would be located were the only facilities with ACM requiring further remediation prior to demolition or construction activities.¹¹ LBP samples were identified in two locations within the general aviation facilities including the area proposed for box hangars, flight school facilities, and a portion of the proposed T-Hangars¹² and would require

¹¹ See Appendices F-2 and F-5.

¹² See Appendices F-3 and F-5.

remediation and removal prior to demolition and construction activities. Compliance with RR HAZ-1 and RR HAZ-2 would be required for all demolition and construction activities.

All hazardous materials used or generated as part of construction activities would be regulated by existing federal, State, and local regulations. By adhering to regulatory requirements and compliance with the County Standard Conditions, potential impacts associated with hazardous material use or generation due to demolition and construction of the Proposed Project would be maintained to below a level of significance.

Long-Term Operational Impacts

Operation and maintenance activities associated with the Proposed Project would be consistent with the existing conditions at the Airport. This scenario provides for two full service FBOs and one limited service FBO, which would provide aircraft maintenance and service. Table 4.5-2 presents a partial list of hazardous materials and wastes typically found in aircraft maintenance facilities.

**TABLE 4.5-2
HAZARDOUS MATERIALS AND WASTES FOUND
IN AIRCRAFT MAINTENANCE FACILITIES**

Aircraft Systems	Aircraft Servicing	Components Shops
<i>Systems Liquids</i>	<i>Lubricants</i>	<i>Inspection</i>
Gasoline	Dry lubricants	Liquid penetrants
Jet fuels	Spray lubricants	Dye penetrants
Hydraulic fluids	Greases	<i>Welding</i>
Brake fluids	Oil	Argon gas
Anti-ice additives	<i>Solvents and Cleaners</i>	Hydrogen gas
<i>Gasses</i>	Methyl ethyl ketone	Oxygen gas
Frons	Toluene	Acetylene gas
Nitrogen	Engine cleaners	Fluxes and pastes
Oxygen	Carburetor cleaners	<i>Others</i>
Halons	<i>Paints & Primers</i>	Compressed air
<i>Others</i>	Paint strippers	Glass beads
Alcohols	Primers	Bluing and thinner
Methanol	Doping products	Quenching fluids
Batteries	Lacquers	Muriatic acid
Glycol	Enamels	Locking compounds
Baking Soda	Epoxies	Oxidizers
Degreasers	<i>Adhesives</i>	Mineral spirits
Disinfectants	Fiberglass resins	Cutting fluids
	Gasket rubber adhesives	Soldering fluxes
Source: AECOM 2018a.		

The Proposed Project is consistent with the number and type of FBOs currently on the Airport; therefore, it would not change the services offered at the Airport. As part of the design, facilities providing aircraft MRO would have designated areas designed for adherence to best management practices (“BMPs”) and control measures for handling and storing various types and quantities of regulated hazardous materials used to service several different aircraft at any given time. Standard design practices, such as hangars incorporating subfloor design measures to mitigate fuel and oil spillage would also reduce the potential for contamination or release of hazardous materials. Hangars used for light or heavy maintenance/repairs and overhauls of aircraft engines would also consider the installation of oil, water, and fuel separation systems. Design practices, such as the incorporation of ventilation filtration methods would mitigate any fuel or hazardous fumes from accumulating in high concentrations inside a hangar. These would be consistent with current regulations for the handling of hazardous materials and are required by SC HAZ-2. Additionally, if the type of services proposed by any of the FBOs (limited or full service) requires welding, SC HAZ-1 would apply. Given the nature and extent of the MRO services conducted at the facilities, requirements consistent with the proper storage and disposal of hazardous wastes would be applied (AECOM 2018a).

The Proposed Project incorporates a reduction in general aviation aircraft and operations. Therefore, a substantial increase in the quantities of hazardous material being used and stored at the Airport is not anticipated. Standard Conditions (“SC”) SC HAZ-2 and SC HAZ-4 address the storage and handling of hazardous materials.

The Proposed Project incorporates provisions for the installation of a self-serve fueling station for avgas conceptually located on the west side of the Airport. The size of the aviation fuel tank for the self-service fueling station is not yet determined, although a standard tank size ranges from 5,000 to 20,000 gallons for each fuel type. These facilities can be installed above ground or underground; however, it is anticipated that the tank associated with self-serve fueling station would be above ground. The most probable accident scenario for the bulk fuel storage tanks involves minor leakage or release of fuel (e.g., from valves or seals). The design requirements for the self-serve fuel station would include a secondary containment system. As noted in Section 3, Project Description, the containment can be in the form of a wall surrounding the tank area or a double-walled tank. This would minimize the potential for a spill that would extend beyond the Airport. As discussed above, OCFA personnel from the ARFF station are located on site to intervene to prevent a fire, contain the spill, and/or prevent spilled fuel from entering the storm drain system. The potential hazards associated with the self-service fueling station are not substantially different from the other fuel storage facilities located on the Airport. Further, the Proposed Project would not result in a substantial increase in the amount of fuel used at the Airport. This scenario would result in a reduction in general aviation aircraft; however, there would be a slight change in the fleet mix. The current BMPs for handling of the fuel would continue to apply; and, therefore, it is not a reasonably foreseeable significant hazard to the public or environment. Because the Airport has adopted procedures for handling fuel spills and implemented structural improvements to prevent them, the potential impacts associated with hazardous materials would not be considered significant. At the Airport, all hazardous materials are handled in full compliance with applicable codes. In addition, the Airport has obtained all necessary permits for the handling of hazardous wastes. Compliance with RR HAZ-3 would be required for all fuel handling and transport activities.

The access route to the general aviation fuel farm used by fuel trucks would not be modified as a result of the Proposed Project. Fuel trucks would continue to take either the exit at MacArthur Boulevard from I-405 traveling southbound and continue south onto Campus Drive, or SR-73 at the Campus Drive exit and turn north up to Quail Street. Minor modifications to the Campus Drive and Quail Street intersection are proposed to eliminate the curved entrance through the parking lot. Access would continue to be right-in and right-out. These design changes would not complicate fuel delivery or result in an unsafe condition. Fuel delivery would still be required to adhere to all local, state and federal regulations, as well as the utilization of BMPs when handling hazardous materials. Fuel trucks accessing the proposed self-serve fueling station would access from Paularino Avenue on the west side of the Airport. The avgas delivery trucks would follow a route similar to trucks that deliver Jet-A fuel to the existing commercial fuel farm, but turn south after proceeding through the Paularino gate. The risks associated with the fuel delivery and storage practices would not substantially change from current conditions, and the Proposed Project would not result in a significant impact.

One potential option that may be considered during the design and implementation phases of the Proposed Project would be to connect the Full Service Northeast FBO to the hydrant fueling system for Jet-A fuel. Currently, the commercial carriers receive fuel from hydrants on the commercial apron, which are connected by underground pipelines from the fuel farms located on the west side of the Airport. The hydrant fueling system extends to the RON parking apron for commercial aircraft located south of the passenger terminal building. Connection of the Full Service Northeast FBO to the underground hydrant fueling system would require extension of the pipeline for only a short distance and construction of a new hydrant fueling station. This would be constructed by trenching from the current terminus at the RON area and installing a new length of pipe. The fueling station would be installed per manufacturer requirements and FAA standards. This would allow the FBO to pump Jet-A fuel from the commercial fuel farm directly to the eastside FBO refueling trucks. The extension of the hydrant fueling system would not increase the potential for spills related to the transport of hazardous materials because the method for fuel delivery to the Airport would not change. The extension of the hydrant fueling system would minimize the number of fueling trucks crossing the Airport. In addition to a more efficient method of fuel delivery to the FBO, this method has the potential to incrementally reduce risk of upset.

The Proposed Project would continue the general aviation operations and support services at JWA. Activities involving the use of hazardous materials at JWA are associated with fueling, maintenance, and repair of aircraft. Compliance with the County's established guidelines consistent with State and federal regulations pertaining to hazardous materials shall ensure that the risk associated with the use and storage of the materials is minimal. JWA provides for temporary collection and storage of waste oils and solvents generated by aircraft owners that are County tie-down tenants. Compared to existing conditions, the Proposed Project would involve a reduction in general aviation aircraft and operations at JWA. With the continuation of the Airport's stringent fuel safety protocols and associated low incidence of fuel releases, as well as compliance with applicable regulations and permits, there is substantial evidence that the Proposed Project would not create a significant hazard to the public or the environment related to routine transport, use, or disposal of hazardous materials or the release of hazardous materials or a risk of upset that would involve a release of hazardous materials into the environment. The Proposed Project would result in a less than significant impact, and no mitigation is required.

Impact Conclusion: *The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact under Thresholds 4.5-1 and 4.5-2.*

Alternative 1

Short-Term Construction Impacts

As with the Proposed Project, Alternative 1 would involve the use, storage, and handling of hazardous and non-hazardous materials as well as the generation of hazardous waste. Alternative 1 proposes a different mix and configuration of facilities than the Proposed Project; however, the overall nature of the improvements and subsequent operations utilizing those facilities would be similar. The same short-term demolition and construction impacts related to hazardous materials such as asbestos-containing materials and lead-based paint discussed for the Proposed Project would apply to Alternative 1. Compliance with RR HAZ-1 and RR HAZ-2 would be required for all demolition and construction activities.

All hazardous materials used, or generated, would be regulated by existing federal, State, and local regulations. By adhering to regulatory requirements, application of Standard Conditions, and BMPs, potential impacts associated with hazardous material use or generation due to demolition and construction of Alternative 1 would be maintained to below a level of significance.

Long-Term Operational Impacts

As with the Proposed Project, general aviation activities at JWA would continue under Alternative 1. Operation and maintenance activities associated with Alternative 1 would be consistent with the existing conditions at JWA. Though Alternative 1 provides for three full service FBOs, this alternative does not substantially change the number of based aircraft or operations. Therefore, a substantial change in the quantities of fuel or other hazardous materials is not projected. The BMPs for handling of the fuel would continue to apply, and other adopted procedures for handling fuel spills would be applicable.

Compared to existing conditions, Alternative 1 would not create a significant hazard to the public or the environment related to routine transport, use, or disposal of hazardous materials or the release of hazardous materials or a risk of upset that would involve a release of hazardous materials into the environment. Alternative 1 would result in a less than significant impact, and no mitigation is required.

Impact Conclusion: *Alternative 1 would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be a less than significant impact.*

Threshold 4.5-3

- ***Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

The Proposed Project and Alternative 1 would redevelop and operate on the same portion of the Airport site. The uses on the west side of the Airport, closest to existing schools are very similar. Therefore, the potential impacts associated with the handling of hazardous materials or waste within 0.25 mile of an existing school would be the same with either development scenario. To avoid undue repetition the evaluation of both development scenarios have been combined into a single discussion for each of the thresholds.

Proposed Project and Alternative 1

At its closest point, Mariner's Christian School, located at Red Hill Avenue and Fisher Avenue, is approximately 0.25 mile west of the Airport facilities. As discussed above, for the Proposed Project and Alternative 1, operation and maintenance activities would be consistent with the existing conditions at the Airport. The GAIP would not alter the delivery routes for fuel or require substantially greater quantities of fuel being delivered to the Airport. Both the Proposed Project and Alternative 1 would reduce the number of based aircraft and general aviation operations compared to existing conditions. None of the characteristics associated with the GAIP would substantially increase the quantity or nature of hazardous materials on the Airport. The GAIP does not propose changes to the adopted procedures for handling hazardous materials, which are all handled in full compliance with applicable codes. The adopted safety programs currently in operation are able to reduce the potential health risks because the fuel spills are contained and cleaned up on site and historically have not left the Airport. These adopted ongoing programs and procedures reduce the potential for risk of exposure to schools in proximity to the Airport.

The GAIP (Proposed Project and Alternative 1) would provide a self-serve fueling station on the west side of the Airport. The fueling station would be located approximately 0.5 mile from the closest point of the school property (i.e., the southeast corner). Assuming the fuel is delivered to the fueling station through the Paularino Avenue gate and trucks using the Perimeter Road, the closest point that fuel trucks would be to the school is approximately 0.25 mile. However, at this location the trucks would be traveling on an internal Airport road, which would reduce the potential for an accident that would result in a fuel release. The FBO fuel trucks currently use Perimeter Road when delivering fuel to aircraft on the west side of the airfield; therefore, this is not a change from existing conditions. The quantities and route for fuel deliveries to the general aviation fuel farm on the southeast side of the Airport would not change from existing conditions. Therefore, the Proposed Project and Alternative 1 would result in a less than significant impact related to handling of hazardous materials within 0.25 mile of a school, and no mitigation is required.

Impact Conclusion: *The Proposed Project and Alternative 1 would have a less than significant impact related to handling of hazardous materials within 0.25 mile of a school under Threshold 4.5-3.*

4.5.7 CUMULATIVE IMPACTS

Because hazardous materials are often site-specific and localized, the potential for cumulative impacts is limited. For cumulative hazards and hazardous materials impacts to occur, the projects would need to be relatively close to each other so Project-related impacts would collectively pose a significant impact. Four projects on the Airport have been identified as cumulative projects. The potential hazardous material impacts associated with the Paularino Gate Relocation Project and rehabilitation of Taxiway “B” would be only construction-related impacts. However, each of these projects is expected to be complete prior to the initiation of the GAIP improvements. The Wickland Pipeline project will provide fuel to the Airport via a pipeline and construction of two new fuel storage tanks south of the existing west side Airport fuel tanks. The project is under construction and is expected to be completed by the end of 2018, whereas, the construction of the GAIP improvements is expected to start in 2019. The Settlement Agreement Amendment project did not propose any physical improvements. Therefore, there would be nominal potential for the Proposed Project or Alternative 1 to contribute to cumulative construction impact.

The Wickland Pipeline and Settlement Agreement Amendment projects would both increase the amount of fuel stored and/or used at the Airport. The risks associated with the increased fuel storage were evaluated in the environmental documents prepared for these projects. The assessment in the Mitigated Negative Declaration prepared for the Wickland Pipeline project and the Settlement Agreement Amendment Program EIR identified the risks of a substantial spill or substantial rupture of the tanks as very remote. The most probable accident scenario for the bulk fuel storage tanks involves minor leakage or release of jet fuel (e.g., from valves or seals) into the bermed containment area that surrounds the tanks and does not represent a public or environmental health risk. The Wickland Pipeline project incorporates a substantial number of regulatory requirements, project design features, and mitigation measures that would reduce the potential impacts to less than significant. In light of the adopted safety programs that are currently in operation and would be applicable to all the projects on JWA, the potential health risks are low because the fuel spills are contained and cleaned up and do not enter the Airport drainage system.

Based on the above evaluation, the risk associated with cumulative hazardous materials and hazardous waste impacts would be less than significant for both the Proposed Project and Alternative 1.

4.5.8 MITIGATION PROGRAM

Compliance with applicable federal, State, and local requirements including Emergency Response, Spill Response, SWPPP, SPCC Plan, County Standards Conditions of Approval, BMPs, and Regulatory Requirements currently in place at JWA would continue to be applicable as the Project moves forward. As a result, no significant hazardous materials impacts would result from implementation of the Proposed Project and Alternative 1. Therefore, no additional hazardous materials mitigation measures have been identified.

4.5.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Due to the absence of significant impacts, no mitigation measures are necessary. As a result, there would be no significant, unavoidable impacts associated with the Proposed Project and Alternative 1. Due to the localized nature of the hazardous materials onsite and the regulatory framework to protect against the release of hazardous materials, the GAIP (Proposed Project and Alternative 1) would not contribute to cumulative hazardous materials impacts.

4.5.10 REFERENCES

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