4.7.3 Hazardous Materials

4.7.3.1 Introduction

The hazardous materials analysis addresses the potential for the SPAS alternatives to affect ongoing soil and groundwater contamination remediation activities at the airport and within the acquisition areas. Appendix G3, *Hazardous Materials*, contains additional information regarding known soil and/or groundwater contamination sites located within the hazardous materials study area. This section also addresses the potential for the SPAS alternatives to result in soil or groundwater contamination due to an accidental release of hazardous materials, expose construction workers to hazardous materials or substances during construction, and impair the effective implementation of emergency response activities.

As indicated in the revised LAX SPAS EIR Notice of Preparation/Initial Study (October 2010), included as Appendix A, *Notice of Preparation/Scoping*, the SPAS alternatives would not include the use or storage of acutely hazardous materials, substances, or waste. However, schools within one-quarter mile of LAX may be adversely impacted by hazardous air emissions from aircraft and airport-related vehicles/traffic. Potential human health risks of increased emissions of toxic air pollutants on sensitive receptors are addressed in Section 4.7.1, *Human Health Risk Assessment*. In addition, as indicated in the revised LAX SPAS EIR Notice of Preparation/Initial Study (October 2010), the SPAS alternatives would not expose people or structures to wildland fires because the project site is developed and there are no fire hazard areas containing flammable brush, grass, or trees on the project site.

Construction and operation of the SPAS alternatives would involve the routine use, transport, and disposal of potentially hazardous materials or substances, including vehicle fuels, oils, transmission fluids, and cleaning solvents. As indicated in the revised LAX SPAS EIR Notice of Preparation/Initial Study (October 2010), compliance with existing federal, state, and local regulations and routine precautions would reduce the potential for accidental releases of a hazardous material or substance to occur and would minimize the impact of an accident should one occur. As such, the SPAS alternatives would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and substances. Therefore, this issue is not addressed any further within this section.

4.7.3.2 Methodology

The study area for the hazardous materials analysis includes the airport property and SPAS alternatives acquisition areas. Data about known contaminated sites and remediation status are representative of 2011, as this is the timeframe during which database review was conducted. Conditions in 2011 are sufficiently similar to 2010 to provide for disclosure of impacts relating to hazardous materials and substances. Impacts with respect to existing contamination and remediation activities were evaluated by mapping areas of known contamination within the hazardous materials study area and comparing those locations to areas of planned excavation under the SPAS alternatives. This process identified areas where substantial contamination may be encountered during construction and where construction activities would have the potential to interfere with the clean up of sites that are currently undergoing remediation or that have remediation planned in the near future. These impacts are typically construction-related.

Data regarding areas of known contamination were obtained from a variety of sources. As required by Public Resources Code Section 21092.6, a search of database lists was conducted to determine if regulatory agencies have identified sites within the hazardous materials study area as having been contaminated by hazardous materials or substances releases. A computerized government records search performed by Environmental Data Resources Inc. (EDR), as summarized below, was completed in August 2011 to identify potential areas of groundwater and/or soil contamination within the hazardous materials study area. The records search included numerous federal, state, and local government databases, such as those identifying leaking underground storage tanks (USTs), sites with known

hazardous materials or substances releases, and sites with extensive contamination and ongoing remediation (e.g., National Priority List [NPL] sites).

The product of those reviews is the EDR report, which is provided as Appendix G3, *Hazardous Materials*, of this EIR. Site contamination information from the EDR report was supplemented by information from LAWA personnel.

4.7.3.3 Existing Conditions

Regulating Authorities

As described below, past activities on and off the airport have resulted in contamination of soil and groundwater by hazardous materials or substances. Releases of hazardous materials are subject to a complex set of reporting requirements, including notification to the City of Los Angeles Fire Department (LAFD) and the state Office of Emergency Services (OES). Remediation of contamination is subject to stringent oversight by federal, state, county, and city agencies, depending on the nature of contamination. There are no contaminated sites at or near LAX that are subject to federal oversight. The LAFD oversees contamination resulting from leaking USTs. The State Regional Water Quality Control Board (RWQCB) has the authority to require the remediation of sites where groundwater quality may be degraded by hazardous materials or substances releases from USTs or other sources. These agencies require that remediation continue until regulatory requirements are met and closure is granted.

Various soil and groundwater remediation techniques that are typically required by the RWQCB are currently in operation at LAX and within the acquisition areas. The techniques include ex-situ remediation (soil is excavated and either treated or disposed of at a licensed landfill), and in-situ remediation (soil is treated in place by bioremediation, vapor extraction, or other types of methods). Specific sites at LAX also have product recovery systems in groundwater wells to remove petroleum hydrocarbon free product from the groundwater. The above techniques for soil and groundwater remediation are established technologies of proven effectiveness.

In order to facilitate the implementation of LAX Master Plan Commitment HM-2, Handling of Contaminated Materials Encountered During Construction, LAWA prepared the *Procedure for the Management of Contaminated Materials Encountered During Construction* (the "Procedure") in 2005 for application to all LAX Master Plan projects.[407] This Procedure provides detailed guidance for implementing LAX Master Plan Commitment HM-2, especially for projects involving excavation and grading of soils. The Procedure requires the preparation of detailed plans for handling previously unknown contaminated soil encountered during construction as well as spills of hazardous materials or substances that may occur during construction. It also requires the preparation of detailed health and safety and soils management plans, and includes provisions for testing and segregation of contaminated soils for proper disposal. While the Procedure focuses on previously unknown contaminated materials, its provisions for handling, storing, and disposing of contaminated materials also apply to contaminated materials that LAWA has already identified, or will identify, before the start of construction of an LAX Master Plan project in the area of contamination. LAX Master Plan Commitment HM-2 is described in detail in Section 4.7.3.5 below.

Remediation of contamination has the potential to expose workers to hazardous materials or substances. The South Coast Air Quality Management District (SCAQMD) regulates emissions from soil remediation activities through Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil. This rule requires development and approval of a mitigation plan, monitoring of volatile organic compound (VOC) concentrations, and implementation of the mitigation plan if VOC-contaminated soil is detected. Worker safety and health are also regulated by the federal Occupational Safety and Health Act (OSHA) of 1970 and the California Occupational Safety and Health Act (CalOSHA). OSHA and CalOSHA standards establish exposure limits for certain air contaminants. Exposure limits define the maximum amount of

[407] City of Los Angeles, Los Angeles World Airports, Procedure for the Management of Contaminated Materials Encountered During Construction, 2005.

hazardous airborne chemicals to which an employee may be exposed over specific periods. When administrative or engineering controls cannot achieve compliance with exposure limits, protective equipment or other protective measures must be used. Employers are also required to provide a written health and safety program, worker training, emergency response training, and medical surveillance.

Known Contamination Within the Hazardous Materials Study Area

As mandated by federal and state requirements, LAWA and its tenants employ extensive engineering controls to prevent hazardous materials or hazardous substances spills and underground releases and to control releases should they occur. These engineering controls include leak and overfill detection systems, double containment tanks and piping, secondary containment areas, spill prevention control and countermeasure (SPCC) plans and facility specific response plans (FSRP), and employee training in hazardous materials and hazardous substances handling and spill response. Off-airport hazardous materials and hazardous substances users employ similar measures to reduce the risk of a release in compliance with federal and state requirements.

Past activities conducted by LAWA, former and present tenants, and property owners within the acquisition areas, have resulted in releases of hazardous materials or substances into the environment, causing soil and groundwater contamination at various locations. Given the difficulty of detecting underground leaks, it is believed that the contamination generally resulted from underground releases, rather than aboveground spills. Investigation and remediation of contaminated sites is undertaken by the party responsible. LAWA monitors known or potential groundwater contamination through the Environmental Services Division. LAWA's monitoring program tracks the progress of tenant investigation, monitoring, and remediation activities associated with groundwater contamination sites at LAX to ensure that adequate and appropriate clean up goals are set and attained. All facilities with known groundwater contamination, both on- and off-airport, are regulated by the RWQCB, which reviews and approves all work plans and establishes and enforces remediation requirements and schedules. While LAWA oversees the status of remediation activities on the airport, individual tenants are ultimately responsible for ensuring that groundwater contamination is remediated to the satisfaction of the RWQCB. **Table 4.7.3-1** summarizes known past and present contamination within the hazardous materials study area, as documented in the EDR report. Sites that pose the greatest threat to human health and the environmental are NPL sites, also known as "Superfund" sites. There are no NPL-listed or NPL-candidate sites located within the hazardous materials study area (refer to Page 1, MAP Findings Summary, in Appendix G3, *Hazardous Materials*).

Some of the sites listed in **Table 4.7.3-1** are "closed," meaning that remediation has been completed to the satisfaction of regulatory agencies. These sites are presented for informational purposes. The approximate locations of identified soil and groundwater contamination on the existing LAX property and within the acquisition areas for the SPAS alternatives are shown in **Figure 4.7.3-1**. LAWA and agency records indicate that the majority of the contamination detected in soil and groundwater within the LAX boundaries and acquisition areas is attributable to fuels and solvents.

There are 32 sites at LAX where hazardous materials releases have resulted, or may have resulted, in groundwater and/or soil contamination. Of these 32 sites, seven have significant soil and/or groundwater contamination and are undergoing remediation activities under LAFD or RWQCB supervision: Park One (Former Honeywell/Allied Signal Aerospace); Avis Rent-A-Car; Continental Airlines Aircraft Maintenance Facility (ACMX); Continental Airlines Terminal 6 (Gate 66 and Passenger Tunnel); Former National Car Rental; United Airlines Maintenance Operations Center (MOC); and United Airlines Terminal 7 (Gate 70B). In addition, remediation may be necessary at two sites that are currently undergoing site investigation: Terminal 1 and Terminal 2 fuel hydrant systems. Typical remediation strategies at these sites include soil vapor extraction (SVE), air sparging (injecting air directly into groundwater), and free hydrocarbon product removal. These systems typically involve subsurface monitoring and extraction wells, underground pipelines, and aboveground treatment vessels. The status of current remediation and investigation efforts at these sites is discussed below.

- **Park One (Former Honeywell/Allied Signal Aerospace).** The site is located immediately northeast of the Central Terminal Area (CTA) at the northwest corner of Century Boulevard and Sepulveda Boulevard, in an area currently used for privately-operated airport parking (Park One). Recent remediation efforts at the site have consisted of SVE to remove VOCs using a granular activated carbon system. However, results for the soil vapor concentrations suggested that optimization of the SVE system was needed. Therefore, the SVE system was shut down pending approval and implementation of work plans by the RWQCB. The RWQCB has recently approved installation of additional soil borings and monitoring wells in accordance with these work plans, which are in the process of being installed. Upon completion of the installation, the SVE system will be restarted, with focused extraction in the highest contamination locations.[408] Additional investigation of soils in the "hotspot" area in the northeast portion of the site is in progress. Further investigation of groundwater contamination is anticipated.
- **Avis Rent-A-Car.** This site is located on Airport Boulevard, between Arbor Vitae Street and 96th Street. The groundwater and soil at the site were contaminated with total petroleum hydrocarbons as gasoline (TPHg); aromatic hydrocarbons, namely benzene, toluene, ethybenzene, and xylene (BTEX); and tertiary butyl alcohol (TBA). Presently, the site is undergoing post-remediation groundwater monitoring following SVE system clean up of soil contamination. Avis has requested case closure but the RWQCB requested Avis to demonstrate that VOCs in groundwater did not originate from on-site sources. Avis plans further investigation of this issue.
- **Continental Airlines Aircraft Maintenance Facility (ACMX).** It is estimated that approximately six to nine feet of Free Hydrocarbon Product (FHP) (jet fuel) had been present in the groundwater beneath the Continental Airlines maintenance site prior to the beginning of remedial activities, resulting from jet fuel releases of approximately 4,000,000 total gallons. In 2005, a Vacuum-Enhanced Free Product Recovery System (VEFPRS) began operating to recover jet fuel. Several phases of well installation were completed and, presently, the VEFPRS consists of 221 recovery wells. To date, approximately 800,000 gallons of jet fuel have been removed. Halogenated volatile organic compound (HVOC) impacts in soil and groundwater near the northeastern edge of the jet fuel plume are currently being assessed.
- **Continental Airlines Terminal 6 (Gate 66 and Passenger Tunnel).** This site is located in the apron and ramp area between Terminals 6 and 7. The soil at the site is contaminated with jet fuel. The full extent of contamination in soil and groundwater has not been determined. Remediation efforts for this site include extracting soil vapor and free hydrocarbon products from soil and shallow groundwater in order to limit impacts to the subsurface Passenger Tunnel.
- **Former National Car Rental.** This site is located on Airport Boulevard, between Arbor Vitae Street and 96th Street. The groundwater and soil at the site are contaminated with TPHg and BTEX. An SVE system has been remediating soil contamination. However, remediation is temporarily suspended due to bankruptcy proceedings of the parent corporation to National. LAWA plans to resume remediation, groundwater monitoring, and case closure efforts pending finalization of a cost settlement with National.
- **United Airlines Maintenance Operations Center.** This site is located south of Century Boulevard along Avion Drive. Site investigation is complete, FHP removal is in progress, and the RWQCB has approved a Human Health Risk Assessment (HHRA) closure plan at the site.
- **United Airlines Terminal 7 (Gate 70B).** During a pipeline abandonment project in 1996, jet fuel from a leaking fuel line was reported to have impacted soil and shallow groundwater. Impacted soil was excavated and a recovery well was installed for FHP removal. FHP had re-appeared by early 2009 and FHP recovery has been resumed to the present date.

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408 AMEC Environmental & Infrastructure, Inc., Third Quarter 2011 Soil Vapor Extraction System Progress Letter Report Former Honeywell Sepulveda Site, Los Angeles, California, November 18, 2011.

Table 4.7.3-1

Existing Soil and Groundwater Contamination and Remediation Status

Site Name[1]	Alternative									Soil		Groundwater	
	1	2	3	4	5	6	7	8	9	Contaminant[2]	Status	Contaminant[2]	Comments
On LAX Property													
1. American Airlines Fuel Farm										BTEX/TPH	Case Closed		
2. Former Arco Day Storage Facility										Jet Fuel	Case Closed		
3. Atlantic Aviation (formerly Mercury Air Cargo)										VOC	Case Closed	TPH	Case Closed
4. Park One (Former Honeywell/Allied Signal Aerospace)	X	X	X		X	X	X	X	X	VOC/1,4- Dioxane	Remediation Ongoing (Soil Vapor Extraction)	VOC/1,4-Dioxane	Site Assessment/Monitoring
5. Avis Rent-A-Car			X	X				X	X	TPH/BTEX/TBA	Remediation Complete; Post Remediation Groundwater Monitoring In Progress	TPH/BTEX/TBA	Site Assessment
6. Continental Airlines ACMX										BTEX/TPH/VOC	Further Site Assessments In Progress	FHP/BTEX/TPH/VOC	Remediation Ongoing (FHP Recovery); 6-9 ft FHP
7. Continental Airlines Terminal 6 (Gate 66/Passenger Tunnel Area)										TPH/VOC	Remediation Ongoing (Soil Vapor Extraction)	FHP/TPH	FHP Recovery
8. Delta Airlines Aircraft Maintenance										BTEX/TPH/VOC	Vapor Extraction Completed	BTEX/TPH/VOC	Case Closed
9. Delta Airlines - Avion Bldg.										TPH	Case Closed		
10. Former FAA Paint Hangar										TPH	Case Closed; Site Redeveloped		
11. Federal Express Maintenance (Former Flying Tigers)										BTEX/TPH	Moderate Potential for Historical Impacts along Former LAXFUEL Lines; No Action Required	FHP/TPH	Moderate Potential For Contaminant Migration From LAXFUEL BFSF
12. Federal Express Cargo (Former Flying Tigers)										BTEX/TPH	Case Closed		
13. LAFD Fire Drill Site										TPH	Case Closed		
14. Garrett Aviation Services										Unspecified	Case Closed		
15. Hertz Rent-A-Car										BTEX/TPH	Case Closed	TPH	Case Closed
16. Korean Airlines Cargo Building										Kerosene	Site Assessment	BTEX/Jet Fuel/VOC	Further Site Assessment Conducted
17. LAFD Station #95										TPH	Case Closed		
18. LA West Terminal Fuels Corp.										BTEX/TPH	Case Closed		
19. Former LAX Airport Traffic Control Tower										Diesel	Case Closed		
20. LAXFUEL Corporation (BFSF)										TPH	Case Closed	FHP/BTEX/TPH/VOC	Case Closed
21. LAXFUEL Corporation (DFSF)												TPH/VOC	Case Closed
22. Marriott/Caterair										BTEX/TPH	Case Closed		
23. Former National Car Rental			X	X				X	X	BTEX/TPH	Remediation Temporarily Suspended, To Be Resumed	BTEX/TPH	Monitoring Temporarily Suspended, To Be Resumed
24. Pan American World Airways, Inc.										Waste Oil	Case Closed		
25. So. Bay Petroleum										BTEX/TPH	Case Closed		
26. Taxiway 75										TPH	No Further Action Planned		
27. Terminal 1 Fuel Hydrant Area	X	X	X		X	X	X			TPH	Site Assessment Anticipated	Jet Fuel/TPH	Site Assessment Anticipated
28. Terminal 2 Fuel Hydrant Area	X	X	X		X	X	X			TPH/VOC	Site Assessment Anticipated	Jet Fuel/TPH	Site Assessment Anticipated
29. Former TOFCO Day Storage										BTEX/TPH	Case Closed		
30. American Airlines (Former Trans World Airlines) Hangar										TPH/VOC	No Further Action Required. USTs Abandoned In-Place		
31. United Airlines Maintenance Operations Center										TPH/VOC	Site Assessment Complete	FHP/TPH/VOC	FHP Removal. HHRA Completed.
32. United Airlines Terminal 7 (Gate 70B)										Jet Fuel	No Further Investigation Requested	Jet Fuel/TPH	FHP Removal
Acquisition Areas													
33. Budget Rent-A-Car	X	X	X	X				X	X	BTEX/TPH	Remediation Ongoing (Soil Vapor Extraction and Dual Phase Extraction); Pursuing Closure	TPH/BTEX/MTBE	Historic Remediation (DPE); Pursuing Closure
34. Resort Rent-A-Car										Diesel	Open Assessment		
35. Texaco Station										Waste Oil	Case Closed		
36. Thrifty Car Rental			X							TPH/BTEX	Remediation Ongoing (Soil Vapor Extraction)	BTEX/TPH/MTBE/TBA	Remediation Ongoing (Air sparging)

Note:

X denotes a site that that is actively under investigation or undergoing remediation and is located in an area with improvements associated with the SPAS alternative identified.

[1] This list includes only those sites with known contamination, as determined through database and information from LAWA personnel.
[2] BTEX: Benzene, Toluene, Ethylbenzene, Xylene (fuel components); TBA: tertiary butyl alcohol; TPH: Total Petroleum Hydrocarbons (fuels); VOC: Volatile Organic Compounds (solvents); FHP: Free Hydrocarbon Product; MTBE: Methyl Tertiary Butyl Ether; Metals: Including Cadmium, Chromium, Nickel, Zinc.

Sources: EDR Inc., EDR DataMap Area Study, 2011; LAWA, 2012.

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0 1,500 ft
Scale north

Source: Los Angeles World Airports, CDM Smith, 2012.
Prepared by: CDM Smith, 2012.

Notes: **Numbers correspond to Table 4.7.3-1 Sites 1 through 32 are on LAX property. Sites 33 through 36 are within the acquisition areas.**

Legend

- Site with Known Soil and/or Groundwater Contamination
- Site with Planned or Ongoing Remediation
- Site Where Remediation May Conflict with One or More SPAS Alternatives

LAX Specific Plan Amendment Study Draft EIR	Existing Soil and Groundwater Contamination and Remediation Sites	Figure 4.7.3-1

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- **Terminal 1 Fuel Hydrant Area.** Soil contamination (TPH) has been detected in the Terminal 1 apron area along the subsurface fuel hydrant system. The highest concentrations were found to the north/northwest of the end of the concourse, as well as to the east. Further characterization of the site is pending. For purposes of this analysis, it is assumed that remediation of soil and/or groundwater at the site will be required.
- **Terminal 2 Fuel Hydrant Area.** Soil contamination (TPH and VOCs) have been detected in the hydrant fuel system to the north/northwest of the end of the Terminal 2 concourse. Groundwater at the site may also be affected. Further characterization of the site is pending. For purposes of this analysis, it is assumed that remediation of soil and/or groundwater at the site will be required.

Within the acquisition areas, there are four sites where hazardous materials or substances releases have, or may have, resulted in soil and/or groundwater contamination. Two of the sites have substantial ongoing or planned remediation activities: Budget Rent-A-Car and Thrifty Car Rental. One additional site, Resort Rent-A-Car, has not yet been characterized. Information regarding these sites is discussed below:

- **Budget Rent-A-Car.** This site is located west of Airport Boulevard, between 96th and 98th Streets. At one time the site contained ten gasoline USTs; these tanks have been removed. The groundwater at the site is contaminated with TPHg and BTEX. Also, methyl tertiary butyl ether (MTBE) has been detected in the groundwater. Since 2006, the site has been under review for closure after several years of SVE remediation. The most recent, publicly-available report of the site recommended a two-week dual phase extraction remediation effort, followed by quarterly monitoring of groundwater wells for a year. The report further recommended case closure for the site if the current dissolved levels remain stable during that time.[409]
- **Thrifty Car Rental.** This site is located on Century Boulevard, between South Concourse Way and Aviation Boulevard. The groundwater and soil at the site are contaminated with TPHg and BTEX. Also, MTBE and TBA have been detected in the groundwater. Presently, remediation activities, including SVE and air sparging, are underway to reduce soil and groundwater contamination.
- **Resort Rent-A-Car.** This site is located on 98th Street east of Vicksburg Avenue (west of the Budget-Rent-A-Car site). The site has not been characterized and the nature and extent of contamination is unreported. The database of contaminated sites, and a search of online state records, yield no indication of past or current remediation at the site.

In addition to the sites listed in **Table 4.7.3-1**, there is the potential for unidentified contamination within the hazardous materials study area from past activities involving hazardous materials or substances.

4.7.3.4 Thresholds of Significance

A significant hazardous materials impact would occur if the direct and indirect changes in the environment that would be caused by the particular SPAS alternative would result in one or more of the following future conditions such that human health and the environment are adversely affected:

- Contamination of soil or groundwater or interference with clean up of sites that are currently undergoing soil or groundwater remediation.
- Unsafe exposure of workers to hazardous materials from contaminated soils and/or groundwater encountered during construction.
- Impairment of the effective implementation of emergency response activities.

409 Los Angeles Regional Water Quality Control Board, Dual Phase Extraction Interim Remedial Action Report Budget Car Rental, prepared by L. Joseph & Associates, LLC, August 16, 2010.

The thresholds are derived from Appendix G of the State CEQA Guidelines and address the characteristics of the SPAS alternatives with the potential to result in impacts related to hazardous materials.[410]

4.7.3.5 Applicable LAX Master Plan Commitments and Mitigation Measures

As part of the LAX Master Plan, LAWA adopted two commitments pertaining to hazardous materials (denoted with "HM") in the Alternative D Mitigation Monitoring and Reporting Program (MMRP). In addition, one construction and eight surface transportation commitments are also relevant to this analysis. The following commitments are applicable to the SPAS alternatives and were considered in the hazardous materials analysis herein.

- **HM-1. Ensure Continued Implementation of Existing Remediation Efforts.**

  Prior to initiating construction of a Master Plan component, LAWA will conduct a pre-construction evaluation to determine if the proposed construction will interfere with existing soil or groundwater remediation efforts. For sites currently on LAX property, LAWA will work with tenants to ensure that, to the extent possible, remediation is complete prior to the construction. If remediation must be interrupted to allow for Master Plan-related construction, LAWA will notify and obtain approval from the regulatory agency with jurisdiction, as required, and will evaluate whether new or increased monitoring will be necessary. If it is determined that contamination has migrated during construction, temporary measures will be taken to stop the migration. As soon as practicable following completion of construction in the area, remediation will be reinstated, if required by the RWQCB or another agency with jurisdiction. In such cases, LAWA will coordinate the design of the Master Plan component and the re-design of the remediation systems to ensure that they are compatible and to ensure that the proposed remediation system is comparable to the system currently in place. If it is determined during the pre-construction evaluation that construction will preclude reinstatement of the remediation effort, LAWA will obtain approval to initiate construction from the agency with jurisdiction.

  For properties to be acquired as part of the Master Plan, LAWA will evaluate the status of all existing soil and groundwater remediation efforts. As part of this evaluation, LAWA will assess the projected time required to complete the remediation activities and will coordinate with the land owner and the agency with jurisdiction to ensure that remediation is completed prior to scheduled demolition and construction activities, if possible. In cases where remediation cannot be completed prior to demolition and construction activities, LAWA will undertake the same steps required above, namely, an evaluation of the need to conduct monitoring; implementation of temporary measures to stop migration, if required; and reinstatement of remediation following completion of construction, if required.

- **HM-2. Handling of Contaminated Materials Encountered During Construction.**

  Prior to the initiation of construction, LAWA will develop a program to coordinate all efforts associated with the handling of contaminated materials encountered during construction.[411] The intent of this program will be to ensure that all contaminated soils and/or groundwater encountered during construction are handled in accordance with all applicable regulations. As part of this program, LAWA will identify the nature and extent of contamination in all areas where excavation, grading, and pile-driving activities are to be performed. LAWA will notify the appropriate regulatory agency when contamination has been identified. If warranted by the extent of the contamination, as determined by the regulatory agency with jurisdiction, LAWA will conduct remediation prior to initiation of

410 City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles, 2006.

411 Subsequent to the approval of the LAX Master Plan, LAWA adopted the "Procedure for the Management of Contaminated Materials Encountered During Construction" for application to all LAX Master Plan projects. This Procedure provides further guidance for implementing LAX Master Plan Commitment HM-2, especially for projects involving excavation and grading of soils.

construction. Otherwise, LAWA will incorporate provisions for the identification, segregation, handling and disposal of contaminated materials within the construction bid documents. In addition, LAWA will include a provision in all construction bid documents requiring all construction contractors to prepare site-specific Health and Safety Plans prior to the initiation of grading or excavation. Each Health and Safety Plan would include, at a minimum, identification/description of the following: site description and features; site map; site history; waste types encountered; waste characteristics; hazards of concern; disposal methods and practices; hazardous material summary; hazard evaluation; required protective equipment; decontamination procedures; emergency contacts; hospital map and contingency plan.

In the event that any threshold of significance listed in the Hazardous Materials section of the EIS/EIR for the LAX Master Plan is exceeded due to the discovery of soil or groundwater contaminated by hazardous materials or if previously unknown contaminants are discovered during construction or a spill occurs during construction, LAWA will notify the lead agency(ies) with jurisdiction and take immediate and effective measures to ensure the health and safety of the public and workers and to protect the environment, including, as necessary and appropriate, stopping work in the affected area until the appropriate agency has been notified.

- **C-1. Establishment of a Ground Transportation/Construction Coordination Office.**

  Establish this office for the life of the construction projects to coordinate deliveries, monitor traffic conditions, advise motorists and those making deliveries about detours and congested areas, and monitor and enforce delivery times and routes.[412] LAWA will periodically analyze traffic conditions on designated routes during construction to see whether there is a need to improve conditions through signage and other means.

  This office may undertake a variety of duties, including but not limited to:

  - Inform motorists about detours and congestion by use of static signs, changeable message signs, media announcements, airport website, etc.;
  - Work with airport police and the Los Angeles Police Department to enforce delivery times and routes;
  - Establish staging areas;
  - Coordinate with police and fire personnel regarding maintenance of emergency access and response times;
  - Coordinate roadway projects of Caltrans, City of Los Angeles, and other jurisdictions with those of the airport construction projects;
  - Monitor and coordinate deliveries;
  - Establish detour routes;
  - Work with residential and commercial neighbors to address their concerns regarding construction activity; and
  - Analyze traffic conditions to determine the need for additional traffic controls, lane restriping, signal modifications, etc.

- **ST-9. Construction Deliveries.**

  Construction deliveries requiring lane closures shall receive prior approval from the Construction Coordination Office. Notification of deliveries shall be made with sufficient time to allow for any modifications to approved traffic detour plans.

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412 Subsequent to the approval of the LAX Master Plan, LAWA established a Ground Transportation/Construction Coordination Office in accordance with the provisions of LAX Master Plan Commitment C-1.

- **ST-12. Designated Truck Delivery Hours.**

  Truck deliveries shall be encouraged to use night-time hours and shall avoid the peak periods of 7:00 a.m. to 9:00 a.m. and 4:30 p.m. to 6:30 p.m.

- **ST-14. Construction Employee Shift Hours.**

  Shift hours that do not coincide with the heaviest commuter traffic periods (7:00 a.m. to 9:00 a.m., 4:30 p.m. to 6:30 p.m.) will be established. Work periods will be extended to include weekends and multiple work shifts, to the extent possible and necessary.

- **ST-17. Maintenance of Haul Routes.**

  Haul routes on off-airport roadways will be maintained periodically and will comply with City of Los Angeles or other appropriate jurisdictional requirements for maintenance. Minor striping, lane configurations, and signal phasing modifications will be provided as needed.

- **ST-18. Construction Traffic Management Plan.**

  A complete construction traffic plan will be developed to designate detour and/or haul routes, variable message, and other sign locations, communication methods with airport passengers, construction deliveries, construction employee shift hours, construction employee parking locations and other relevant factors.

- **ST-19. Closure Restrictions of Existing Roadways.**

  Other than short time periods during nighttime construction, existing roadways will remain open until they are no longer needed for regular traffic or construction traffic, unless a temporary detour route is available to serve the same function. This will recognize that there are three functions taking place concurrently: (1) airport traffic, (2) construction haul routes, and (3) construction of new facilities.

- **ST-21. Construction Employee Parking Locations.**

  During construction of the eastern airport facilities, employee parking locations will be selected that are as close to I-405 and I-105 as possible and can be accessed by employee vehicles with minimal disruption to adjacent streets. Shuttle buses will transport employees to construction sites. In addition, remote parking locations (of not less than 1 mile away from project construction activities) will be established for construction employees with shuttle service to the airport. An emergency return system will be established for employees that must leave unexpectedly.

- **ST-22. Designated Truck Routes.**

  For dirt and aggregate and all other materials and equipment, truck deliveries will be on designated routes only (freeways and non-residential streets). Every effort will be made for routes to avoid residential frontages. The designated routes on City of Los Angeles streets are subject to approval by LADOT's Bureau of Traffic Management and may include, but will not necessarily be limited to: Pershing Drive (Westchester Parkway to Imperial Highway); Florence Avenue (Aviation Boulevard to I-405); Manchester Boulevard (Aviation Boulevard to I-405); Aviation Boulevard (Manchester Avenue to Imperial Highway); Westchester Parkway/Arbor Vitae Street (Pershing Drive to I-405); Century Boulevard (Sepulveda Boulevard to I-405); Imperial Highway (Pershing Drive to I-405); La Cienega Boulevard (north of Imperial Highway); Airport Boulevard (Arbor Vitae Street to Century Boulevard); Sepulveda Boulevard (Westchester Parkway to Imperial Highway); I-405; and I-105.

4.7.3.6 Impacts Analysis

4.7.3.6.1 Alternative 1

Contamination of Soil or Groundwater

Under Alternative 1, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft, buses, and vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes specific procedures for handling hazardous materials, identifying risks and monitoring site conditions, and implementing best management practices (BMPs) and spill prevention and control measures to prevent spills, as well as emergency response procedures and notification requirements in the event of a spill.

Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 1, grading and excavation would be conducted within various areas of the airport and in acquisition areas, including areas of known contamination and remediation, which are shown in **Figure 4.7.3-1**. All of the sites identified in **Figure 4.7.3-1** currently have, or have had, soil and/or groundwater contamination. Some of these sites have been closed (i.e., remediation has been completed to the satisfaction of regulatory agencies); at other sites, remediation is planned or underway, and some sites are still under investigation. There also may be areas of contamination not yet discovered. Alternative 1 improvements that would require substantial excavation in areas of known contamination include:

- Dedicated Transit Access
- Intermodal Transportation Facility (ITF)
- Redesigned Entry Roadways
- Terminal 0
- Southerly relocation of Taxilane D and demolition of a portion of Terminal 1 concourse

Numerous soil and groundwater remediation efforts are planned or underway both at LAX and within the acquisition areas. In some cases, Alternative 1 improvements would be in areas where remediation systems are located or may be planned in the future. Construction of these improvements and associated demolition of existing facilities have the potential to require temporary closure or reconfiguration of some of these remediation systems. Specifically, Park One (Former Honeywell/Allied Signal Aerospace) and Budget Rent-A-Car, have existing soil and groundwater remediation systems in areas of improvements. Improvements are also proposed near the Terminal 1 and 2 hydrant systems, both of which may require remediation in the future. As contamination at the Resort Rent-A-Car site has not been determined at this time, and no remediation is underway or planned, there would be no known conflicts with this site. The locations of these remediation sites are shown in **Figure 4.7.3-1**. Alternative 1 improvements in the vicinity of these facilities may be initiated before the soil and groundwater remediation is complete.

The following Alternative 1 components would have the potential for conflicts with ongoing remediation efforts within LAX and acquisition areas due to the substantial excavation required for their implementation and the nature and extent of remediation underway in these areas:

- ITF, located between 96th and 98th Streets and between Vicksburg Avenue and Airport Boulevard, and a portion of the dedicated transit access, both of which would be constructed on the Budget Rent-A-Car site.
- Redesigned entry roadways and Terminal 0, located between Sepulveda Boulevard and Terminal 1, which would be constructed on the Park One site.
- Southerly relocation of Taxilane D and demolition of a portion of the Terminal 1 concourse, which would occur at Terminals 1 and 2.

Due to the extent of the VOC contamination associated with the Park One (Former Honeywell/Allied Signal Aerospace) site, it is possible that remediation will still be underway when construction of Terminal 0 and the redesigned entry roadways is initiated. Remediation for this site consists of an SVE system that includes small aboveground vessels for treating the soil vapor, pipes connecting the dry wells to the vessels, and groundwater monitoring wells. Due to the extent of excavation needed for the Alternative 1 improvements, it is likely that part, or all, of the remediation system would have to be removed during construction, if it is still in operation at the time the SPAS improvements are constructed. This would entail destruction of the extraction wells and removal of underground piping and aboveground vessels. Removing the active remediation system at Park One for an extended period would interfere with existing clean up efforts. However, temporary cessation of remediation would not have any impacts on human health as groundwater beneath the site is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

Construction of the ITF and a portion of the dedicated transit access is unlikely to interfere with ongoing remediation at the Budget Rent-A-Car site. The landowner is pursuing closure of this site and it is possible that such closure will be obtained prior to implementation of these improvements. If remediation systems are still in place at the time of construction, destruction and removal of these facilities is not expected to be required to construct the ITF and dedicated transit access. If the landowner obtains closure of the site prior to implementation of these improvements, there would be no potential for Alternative 1 improvements to interfere with remediation efforts.

The demolition of the northernmost portion of Terminal 1 and the southerly relocation of Taxilane D may come in contact with contaminated soils in the vicinity of Terminals 1 and 2. Contamination at these sites is currently being characterized, and no remediation has been planned at this time. If remediation is required at these sites, and is still ongoing when Taxilane D is relocated and the northern portion of Terminal 1 is demolished, these activities have the potential to interfere with remediation activities. Due to the localized nature of contamination at these locations, it is expected that remediation activities, if required, could be maintained during taxiway relocation and modifications to Terminal 1.

To prevent SPAS-related construction from interfering with planned or ongoing remediation such that environmental contamination is exacerbated or permanent clean up of sites prevented, LAWA would implement LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts. Implementation of this commitment would ensure that remediation projects would be completed to the extent possible and necessary before constructing SPAS improvements, or that alternate clean up methods would be implemented during construction to prevent contaminant migration, if necessary. As part of this commitment, remediation systems would be reinstated following the completion of construction, if required. Therefore, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

As noted above, Alternative 1 improvements that pose the potential for construction workers to encounter contamination during construction include the ITF, dedicated transit access, Terminal 0, redesigned roadways, southerly relocation of Taxilane D, and demolition of a portion of Terminal 1 concourse, as they would entail major excavation in areas of known soil and/or groundwater contamination. In addition, it is possible that, during other construction activities for implementation of Alternative 1, previously unidentified soil and/or perched groundwater contamination could be encountered.

Exposure of construction workers to contaminated materials would be minimized by implementing the measures required by federal, state, and local laws and regulations. These include OSHA and CalOSHA standards, which establish exposure limits for workers; require protective equipment or other protective measures, when warranted; and require employers to provide a written health and safety program, worker training, emergency response training, and medical surveillance. Nevertheless, due to the amount of grading and excavation that would be undertaken to implement Alternative 1, and the number of SPAS improvements that may be undertaken concurrently by different contractors throughout the construction period, LAWA would comply with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, and identifies procedures associated with identification and handling of excavated contaminated materials. The Procedure requires, among other things, preparation of a site-specific Health and Safety Plan that incorporates OSHA and CalOSHA regulations, as well as FAA and LAWA health and safety requirements in order to minimize the risk of injury to site workers and the general public; trained hazardous waste operations and emergency response (HAZWOPER) personnel; characterization of areas where contaminated soils are encountered through preparation of Site Sampling and Analyses Plans, as well as specific procedures for handling such materials, identifying risks, and monitoring site conditions; and implementation of BMPs and spill prevention and control measures to prevent spills, as well as emergency response procedures and notification requirements in the event of a spill. Compliance with the Procedure would ensure that contaminated materials encountered during construction are properly identified, stored, remediated, and disposed of in accordance with all applicable regulations, including those governing worker health and safety. As such, impacts to construction workers associated with the excavation of contaminated materials would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Implementation of Alternative 1 would alter ground access to, from, and around LAX. A lack of adequate access could impair the effective implementation of emergency response activities by impeding the movement of emergency vehicles. During construction, local roadway and/or lane closures would occur for varying periods; however, local access would be adequately maintained through detours and diversions, and emergency access would be coordinated and ensured through LAX Master Plan Commitment C-1, Establishment of a Ground Transportation/Construction Coordination Office, and LAX Master Plan Commitments ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22. In addition, as indicated in Section 4.12.1, *On-Airport Transportation*, roadways within the CTA would operate at an acceptable level of service under Alternative 1. As a result, the implementation of emergency response activities would not be impaired, and impacts would be less than significant.

4.7.3.6.2 Alternative 2

Contamination of Soil or Groundwater

Under Alternative 2, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft, buses, and vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 2, the improvements that would require substantial excavation in areas of known contamination would be the same as discussed for Alternative 1. Therefore, impacts to current or future remediation projects would the same. As with Alternative 1, construction of Terminal 0 and the redesigned entry roadways may interfere with ongoing remediation at Park One, if the remediation is still in operation at the time the Alternative 2 improvements are constructed. As discussed under Alternative 1, such interference would be temporary, and would not have any impacts on human health. Construction of the ITF and a portion of the dedicated transit access is not expected to interfere with remediation efforts the at Budget Rent-A-Car site. Remediation of this site may be complete prior to implementation of these Alternative 2 improvements. If it is still ongoing, destruction and removal of the remediation systems is not expected to be required to construct the ITF and dedicated transit access. Similarly, the southerly relocation of Taxilane D and demolition of a portion of the Terminal 1 concourse are not expected to interfere with future potential remediation at Terminals 1 and 2, due to the localized nature of contamination at these locations. With implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 2, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 2, impacts to the impairment of the effective implementation of emergency response activities would be the same as discussed for Alternative 1. As with Alternative 1, although ground access would be altered, with implementation of LAX Master Plan Commitments C-1, ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22, the implementation of emergency response activities would not be impaired and impacts would be less than significant.

4.7.3.6.3 Alternative 3

Contamination of Soil or Groundwater

Under Alternative 3, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft, buses, vehicles, and the APM, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 3, grading and excavation would be conducted within various areas of the airport and in acquisition areas, including areas of known contamination and remediation, which are shown in

Figure 4.7.3-1. All of the sites identified in **Figure 4.7.3-1** currently have, or have had, soil and/or groundwater contamination. Some of these sites have been closed, others have planned or ongoing remediation, and some are still under investigation. There also may be areas of contamination not yet discovered. Alternative 3 improvements that would require substantial excavation in areas of known contamination include the following:

- Automated People Mover (APM) 2
- Consolidated Rental Car Facility (CONRAC)
- Linear Concourse
- Southerly relocation of Taxilane D
- Redesigned roadways east of Aviation Boulevard

Under Alternative 3, sites with ongoing remediation in areas of SPAS improvements include Park One, Budget Rent-A-Car, Avis Rent-A-Car, Former National Car Rental, and Thrifty Car Rental. Improvements are also proposed near the Terminal 1 and 2 hydrant systems, both of which may require remediation in the future. The locations of these remediation sites are shown in **Figure 4.7.3-1**.

The following Alternative 3 components would have the potential for conflicts with ongoing remediation efforts within LAX and acquisition areas due to the substantial excavation required for their implementation and the nature and extent of remediation underway in these areas:

- CONRAC and a portion of APM 2, both of which would be constructed on the Budget Rent-A-Car, Avis Rent-A-Car, and Former National Car Rental sites.
- Roadway improvements east of Aviation Boulevard, which would be constructed on the Thrifty Car Rental site.
- Linear Concourse, which would be constructed on the Park One site, and in the vicinity of Terminals 1 and 2.
- A portion of APM 2, which would be constructed on the Park One site.
- Southerly relocation of Taxilane D, which would be constructed in the vicinity of Terminals 1 and 2.

Similar to Alternative 1, under Alternative 3, due to the extent of contamination at the Park One (Former Honeywell/Allied Signal Aerospace) site, it is possible that remediation will still be underway when construction of the Linear Concourse and APM 2 are initiated. Moreover, due to the extent of excavation needed for the Alternative 3 improvements, it is likely that a portion of the remediation system would have to be removed during construction, if it is still in operation at the time the SPAS improvements are constructed. As discussed under Alternative 1, such interference would be temporary, and would not have any impacts on human health as groundwater beneath the site is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

Also similar to Alternative 1, construction of improvements, specifically the linear concourse and the southerly relocation of Taxilane D, may come into contact with contaminated soils in the vicinity of Terminals 1 and 2. These improvements are not expected to interfere with future potential remediation at Terminals 1 and 2, due to the localized nature of contamination at these locations.

Construction of the CONRAC may interfere with ongoing remediation at the Avis Rent-A Car and Former National Car Rental sites. These sites are currently undergoing remediation and/or groundwater monitoring, although further assessment of groundwater contamination is underway at the Avis Rent-A-Car site. Similarly, construction of the new roadways east of Aviation Boulevard could interfere with soil and groundwater remediation at the Thrifty Car Rental site. Temporary cessation of remediation at these sites, if required, would not have any impacts on human health as groundwater beneath the sites is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

Construction of the southern portion of the CONRAC and a portion of the APM 2 alignment may interfere with ongoing remediation at the Budget Rent-A-Car site. As indicated under Alternative 1, the landowner is pursuing closure of this site and it is possible that such closure will be obtained prior to implementation

of these improvements. Even if remediation is still ongoing, destruction and removal of remediation facilities is not expected to be required to construct the CONRAC and APM 2. If the landowner obtains closure of the site prior to implementation of these improvements, there would be no potential for Alternative 3 improvements to interfere with remediation efforts.

As with Alternative 1, with implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 3, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

As described in Chapter 2, *Project Description*, Alternative 3 would close the CTA to private vehicles and create a number of new off-airport ground access facilities, including a Ground Transportation Center (GTC) at Manchester Square, an Intermodal Transportation Center (ITC) at Continental City, and a CONRAC in the Lot C area. Roadway access to, from, and around the airport would be similar to existing access, although additional lanes would be added to some local roadways in the vicinity of the ground access facilities. Alternative 3 would also alter ground access in the vicinity of the airport during construction. Since local access would be adequately maintained through detours and diversions, and emergency access would be coordinated and ensured through LAX Master Plan Commitment C-1, Establishment of a Ground Transportation/Construction Coordination Office, and LAX Master Plan Commitments ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22, project-related construction would not significantly impair the implementation of emergency response activities and impacts would be less than significant.

4.7.3.6.4 Alternative 4

Contamination of Soil or Groundwater

Under Alternative 4, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft, buses, and vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 4, grading and excavation would be conducted within a limited portion of the airport and in acquisition areas, including an area of known contamination and remediation. There also may be areas of contamination not yet discovered. The only Alternative 4 improvement that would require substantial excavation in an area of known contamination is the CONRAC.

The CONRAC has the potential to conflict with ongoing remediation at the Budget Rent-A-Car, Avis Rent-A-Car, and Former National Car Rental sites. As discussed under Alternative 3, the Avis Rent-A-Car and Former National Car Rental sites are currently undergoing remediation and/or groundwater monitoring and further assessment of groundwater contamination is underway at the Avis Rent-A-Car site. Temporary cessation of remediation at these sites would not have any impacts on human health as groundwater beneath the sites is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed. As indicated under Alternative 3, with respect to the Budget Rent-A-Car site, the landowner is pursuing closure of this site and it is possible that such closure will be obtained prior to implementation of the CONRAC. Even if remediation is still ongoing when CONRAC is implemented, destruction and removal of remediation facilities is not expected to be required to construct the CONRAC. If the landowner obtains closure of the site prior to implementation of the CONRAC, there would be no potential for Alternative 4 improvements to interfere with remediation efforts.

As with Alternative 3, with implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 4, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 4, there would be limited changes to traffic patterns in the airport area. Moreover, disruption to local roads during construction would be much less under this alternative due to the lower level of construction activity. Local access would be adequately maintained through detours and diversions, and emergency access would be coordinated and ensured through LAX Master Plan Commitment C-1, Establishment of a Ground Transportation/Construction Coordination Office, and LAX Master Plan Commitments ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22. In addition, as indicated in Section 4.12.1, *On-Airport Transportation*, roadways within the CTA would operate at an acceptable level of service under Alternative 4. As a result, the implementation of emergency response activities would not be impaired, and impacts would be less than significant.

4.7.3.6.5 Alternative 5

Contamination of Soil or Groundwater

Under Alternative 5, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft and on-airport vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 5, the proposed improvements that would require substantial excavation in areas of known contamination include construction of Terminal 0, the southerly relocation of Taxilane D, and the demolition of a portion of the Terminal 1 concourse. The construction of Terminal 0 may interfere with ongoing remediation at Park One and the relocation of Taxilane D and modifications to the Terminal 1 concourse may come in contact with contaminated soils associated with the Terminals 1 and 2 hydrant systems.

If remediation is still ongoing when Terminal 0 is constructed, it is likely that part, or all, of the remediation system would have to be removed. Removing the active remediation system at Park One for an extended period would interfere with existing clean up efforts. However, temporary cessation of remediation would not have any impacts on human health as groundwater beneath the site is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

If remediation is required at the Terminal 1 and 2 hydrant systems, and is still ongoing when Taxilane D is relocated and the northern portion of Terminal 1 is demolished, these activities have the potential to interfere with remediation activities. Due to the localized nature of contamination at these locations, it is expected that remediation activities, if required, could be maintained during taxiway relocation and Terminal 1 modifications.

With implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 5, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 5, there are no proposed ground access improvements; therefore, there would be no impacts related to the impairment of the implementation of emergency response activities under this alternative.

4.7.3.6.6 Alternative 6

Contamination of Soil or Groundwater

Under Alternative 6, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft and on-airport vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 6, the proposed improvements that would require substantial excavation in areas of known contamination would be the same as discussed for Alternative 5. As with Alternative 5, construction of Terminal 0, the southerly relocation of Taxilane D, and the demolition of a portion of the Terminal 1 concourse may interfere with ongoing remediation at Park One and potential future remediation at Terminals 1 and 2. However, with implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 6, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 6, there are no proposed ground access improvements; therefore, there would be no impacts related to the impairment of the implementation of emergency response activities under this alternative.

4.7.3.6.7 Alternative 7

Contamination of Soil or Groundwater

Under Alternative 7, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft and on-airport vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 7, the proposed improvements that would require substantial excavation in areas of known contamination would be the same as discussed for Alternative 5. As with Alternative 5, construction of Terminal 0, the southerly relocation of Taxilane D, and the demolition of a portion of the Terminal 1 concourse may interfere with ongoing remediation at Park One and potential future remediation at Terminals 1 and 2. However, with implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 7, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly

OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 7, there are no proposed ground access improvements; therefore, there would be no impacts related to the impairment of the implementation of emergency response activities under this alternative.

4.7.3.6.8 Alternative 8

Contamination of Soil or Groundwater

Under Alternative 8, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of buses and vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 8, grading and excavation associated with the ITF, a portion of the dedicated transit access, and redesigned entry roadways would be the same as described under Alternative 1. As with Alternative 1, the ITF and a portion of the dedicated transit access may interfere with ongoing remediation at the Budget Rent-A-Car site and construction of the redesigned entry roadways may interfere with ongoing remediation at Park One, if the remediation is still in operation at the time the Alternative 8 improvements are constructed. In addition, under Alternative 8, construction of parking east of Lot C may interfere with ongoing remediation at the Avis Rent-A-Car and Former National Car Rental sites.

As with Alternative 1, construction of the redesigned entry roadways may interfere with ongoing remediation at Park One, if the remediation is still in operation at the time the Alternative 8 improvements are constructed. As discussed under Alternative 1, such interference would be temporary, and would not have any impacts on human health as groundwater beneath the site is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

Construction of the ITF and a portion of the dedicated transit access is unlikely to interfere with ongoing remediation at the Budget Rent-A-Car site. Remediation may be complete prior to implementation of Alternative 8 improvements. If it is still ongoing, destruction and removal of the remediation system is not expected to be required to construct the ITF and dedicated transit access. If the landowner obtains closure of the site prior to implementation of these improvements, there would be no potential for Alternative 8 improvements to interfere with remediation efforts.

Construction of parking east of Lot C could interfere with ongoing remediation at the Avis Rent-A Car and Former National Car Rental sites. These sites are currently undergoing remediation and/or groundwater monitoring, although further assessment of groundwater contamination is underway at the Avis Rent-A-Car site. Temporary cessation of remediation at these sites, if required, would not have any impacts on human health as groundwater beneath the sites is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

With implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 8, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Implementation of Alternative 8 would alter ground access to, from, and around LAX. A lack of adequate access could impair the effective implementation of emergency response activities by impeding the movement of emergency vehicles. During construction, local roadway and/or lane closures would occur for varying periods; however, roadway access would be maintained through detours and diversions. Since local access would be adequately maintained, and emergency access would be coordinated and ensured through LAX Master Plan Commitments C-1, ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22, the implementation of emergency response activities would not be impaired, and impacts would be less than significant.

4.7.3.6.9 Alternative 9

Contamination of Soil or Groundwater

Under Alternative 9, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of buses, vehicles, and the APM, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As discussed in Section 4.7.3.3, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and clean up requirements. In addition, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, includes procedures to reduce hazardous materials-related incidents and spills, as well as emergency response procedures that would be implemented in the event of a spill. Compliance with the Procedure would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts would be less than significant.

Impacts to Current or Planned Remediation Efforts

Under Alternative 9, an APM would be constructed in place of the dedicated transit access associated with Alternative 8. The APM would follow the same alignment as the transit access in the vicinity of the ITF. Under Alternative 9, grading and excavation associated with the ITF, APM, and redesigned entry roadways would be the same as described under Alternative 8. As with Alternative 8, the ITF and a portion of the APM may interfere with ongoing remediation at the Budget Rent-A-Car site and construction of the redesigned entry roadways may interfere with ongoing remediation at Park One, if the remediation is still in operation at the time the Alternative 9 improvements are constructed. In addition, under Alternative 9, construction of parking east of Lot C may interfere with ongoing remediation at the Avis Rent-A-Car and Former National Car Rental sites.

Remediation of the Budget Rent-A-Car site may be complete prior to implementation of Alternative 9 improvements. If it is still ongoing, destruction and removal of the remediation system is not expected to be required to construct the ITF and APM. If the landowner obtains closure of the site prior to

implementation of these improvements, there would be no potential for Alternative 9 improvements to interfere with remediation efforts.

If remediation is still ongoing at the Park One, Avis Rent-A-Car, and Former National Car Rental sites when Alternative 9 improvements are constructed, cessation of remediation at these sites may be required during construction. Such interference would be temporary, and would not have any impacts on human health as groundwater beneath the sites is not used for municipal purposes and contaminated soils lie beneath asphalt and would not be exposed.

With implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts would be less than significant.

Impacts to Construction Workers from Exposure to Hazardous Materials

Under Alternative 9, impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination would be the same as discussed for Alternative 1. As with Alternative 1, with implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, this impact would be less than significant.

Impacts Related to the Implementation of Emergency Response Activities

Under Alternative 9, impacts related to the impairment of the implementation of emergency access plans would be the same as discussed for Alternative 8. As with Alternative 8, the alteration of ground access to, from, and around LAX could impair the effective implementation of emergency response activities by impeding the movement of emergency vehicles; however, with the implementation of LAX Master Plan Commitments C-1, ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22, these impacts would be less than significant.

4.7.3.6.10 Summary of Impacts

Under all of the SPAS alternatives, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of aircraft, buses, and vehicles, as well as during construction, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. Compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, which was prepared in accordance with LAX Master Plan Commitment HM-2, Handling of Contaminated Materials During Construction, would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in contamination of soil or groundwater. Therefore, impacts under all of the SPAS alternatives would be less than significant.

Proposed improvements associated with all of the SPAS alternatives would require excavation in areas of known contamination. Alternative 3 would have the potential to affect ongoing remediation at the greatest number of sites, whereas Alternative 4 would affect the fewest. However, implementation of LAX Master Plan Commitment HM-1, Ensure Continued Implementation of Existing Remediation Efforts, impacts associated with interference with remediation efforts under all of the SPAS alternatives would be less than significant.

Impacts to construction workers from exposure to known and previously unidentified soil and/or groundwater contamination could be encountered during construction of any of the alternatives. With implementation of measures required by existing laws and regulations, particularly OSHA and CalOSHA standards, as well as compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, this impact would be less than significant for all of the SPAS alternatives.

Implementation of Alternatives 1, 2, 3, 4, 8, and 9 would alter ground access to, from, and around LAX. A lack of adequate access could impair the effective implementation of emergency response activities by impeding the movement of emergency vehicles. During construction, local roadway and/or lane closures would occur for varying periods; however, roadway access would be maintained through detours and diversions. Since local access would be adequately maintained, and emergency access would be coordinated and ensured through LAX Master Plan Commitments C-1, ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22, the implementation of emergency response activities would not be impaired, and impacts would be less than significant under Alternatives 1, 2, 3, 4, 8, and 9. As Alternatives 5 through 7 do not include proposed ground access improvements, there would be no impacts related to the impairment of the implementation of emergency response activities under these alternatives.

4.7.3.7 Mitigation Measures

Implementation of LAX Master Plan Commitment HM-1, and compliance with the *Procedure for the Management of Contaminated Materials Encountered During Construction*, developed in accordance with LAX Master Plan Commitment HM-2, would ensure that impacts related to hazardous materials associated with Alternatives 1 through 9 would be less than significant. Implementation of LAX Master Plan Commitments C-1, ST-9, ST-12, ST-14, ST-17, ST-18, ST-19, ST-21, and ST-22 would ensure that impacts relating to the impairment of the implementation of emergency response activities associated with Alternatives 1 through 4, 8, and 9 would be less than significant, and Alternatives 5 through 7 would not have any impacts on the implementation of emergency response activities. Therefore, no mitigation measures specific to SPAS are required.

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