

6.G.1 HAZARDOUS MATERIALS

6.G.1.1 Introduction

Data was collected from airport tenant surveys, Broward County, Broward County Environmental Protection Department (BCEPD), the Florida Department of Environmental Protection (DEP), and other Federal, state, and local databases to develop a baseline of hazardous materials and hazardous waste generation, and to identify existing areas of contamination at Fort Lauderdale-Hollywood International Airport (FLL). The results of the data review are discussed in greater detail in Chapter Five, *Affected Environment*, relating to existing sources, types, and volumes of hazardous waste at FLL; storage tanks within the airport area; sites with listed contamination; and history of reported spills, existing hazardous building materials, and current fuel facility storage.

The hazardous waste analysis addressed on-site fueling facilities; hazardous waste generation; soil and groundwater contamination and remediation operations; and (removal and/or handling of) hazardous building materials for all of the runway development alternatives. Projections were made based on the current site conditions.

6.G.1.2 General Approach and Methodology

The general approach used for this analysis included projection of hazardous waste conditions associated with each of the runway development alternatives, including the No Action Alternative, and a comparison of those projections to baseline environmental conditions. The study area for the hazardous waste analysis is the limits of disturbance for the runway development alternatives.

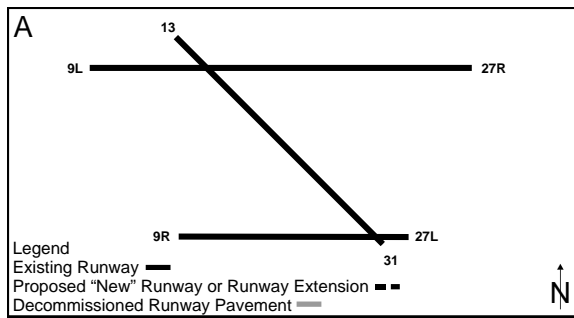
Hazardous materials/waste generation and potential impacts are discussed in this section qualitatively, and the projections are based on the projected growth of overall airport operations and the potential for physical impact based on the alteration of the configuration of the airport. Due to the variety of information sources used to characterize the current conditions at FLL, baseline data was not limited to a single year.

6.G.1.3 Environmental Consequences

Based on the results of the file research conducted and the proposed limits of construction for the runway development alternatives, potential impacts are described under the categories of:

- hazardous materials and waste generation,
- hazardous building materials,
- contaminated sites and leaking storage tanks,
- storage tanks and fuel facilities, and
- dredge and fill material.

6.G.1.3.1 ALTERNATIVE A: NO ACTION



No airfield or terminal construction or development is planned with Alternative A.

Hazardous Materials/Waste Generation: Over the next few years the number of flights; the level of cargo activity; and light maintenance of aircraft, ground service equipment (GSE), and other ground vehicles are expected to increase over baseline conditions. It is assumed that hazardous materials/waste storage and generation will increase in accordance with the increase in operations.

Hazardous waste generated at FLL is collected by waste haulers and transported to one of 13 hazardous material transfer stations located throughout Broward County (See Appendix N, *Hazardous and Waste Materials*, Section 4.1.4.1, *Hazardous Waste Transporters and Transfer Stations*). Based on the available capacity at these facilities, the estimated increase in hazardous waste generated at FLL with the No Action Alternative is not anticipated to impact the handling and disposal capacity of these facilities.

The increase in the use and storage of hazardous materials and generation of hazardous waste anticipated at FLL could potentially increase the chances of a spill or unintended release of hazardous materials. The RCRA; the Occupational Safety and Health Administration (OSHA); and the Spill Prevention, Control, and Countermeasures (SPCC) plans for each of the airport's facilities detail the requirements and guidelines for handling and storing these materials. The SPCC plans also include guidelines for worker training and emergency response. Adherence to these guidelines and continual worker training at each facility would reduce the possibility of an unintended release of hazardous materials.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons.

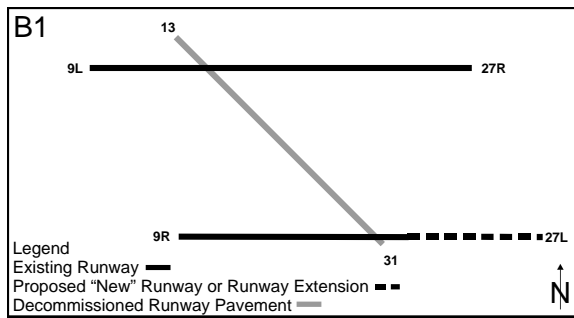
Hazardous Building Materials: No building demolition is proposed with Alternative A.

Petroleum-Impacted Sites and Leaking Underground Storage Tanks (LUSTs): No construction, demolition, or excavation activities would occur with Alternative A. Previous site assessments conducted at the airport identified petroleum impacted areas (and leaking tanks), for which the issues have not been resolved to date. None of these sites would be affected by the No Action Alternative.

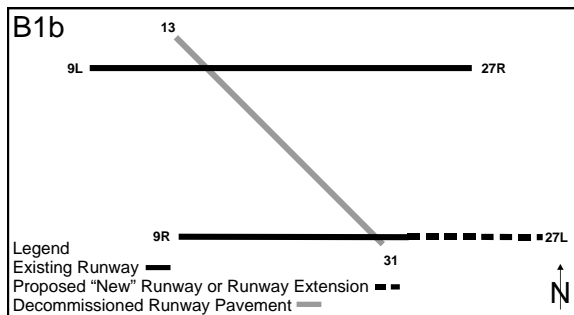
Storage Tanks and Fuel Facilities: No storage tanks or larger scale fueling facilities would be relocated or constructed with Alternative A. To respond to the growth forecast for FLL, increased amounts of fuel would be transported and discharged to meet the forecast demand. With an increase in the fuel movement at the airport, the potential for spills or unintended releases would increase. By adhering to the requirements and guidelines detailed in RCRA, OSHA, and facility SPCC plans, the potential for spills and unintended releases would be reduced.

Alternative A would not result in a significant increase in hazardous waste generation and would have no impact on the available capacity of existing hazardous waste haulers, management, and recycling facilities.

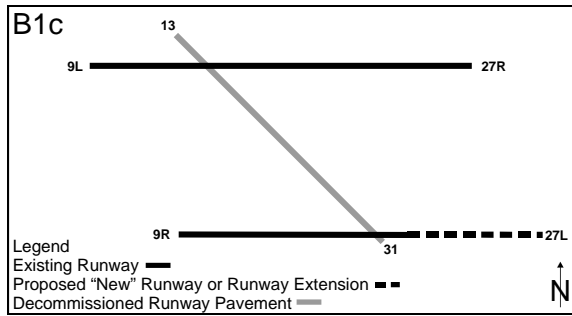
6.G.1.3.2 ALTERNATIVE B1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,600-FOOT BY 150-FOOT ELEVATED RUNWAY



ALTERNATIVE B1b: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS



ALTERNATIVE B1c: (AIRPORT SPONSOR'S PROPOSED PROJECT) REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS; RUNWAY USE DETERMINED BY BROWARD COUNTY'S INTERLOCAL AGREEMENTS



Hazardous Materials/Waste Generation: The projected hazardous waste impacts for Alternatives B1, B1b, and B1c are expected to be the same as Alternative A.

In 2004, a number of tenant surveys were conducted at FLL. The surveys were conducted at the tenant facilities located on the north and west sides of the airport, and the rental car facilities along the east side of the airport. Information was gathered from the tenants regarding the types and quantities of hazardous materials used and stored at the facility, and hazardous wastes generated. Data was collected relating to hazardous waste transportation and disposal.

The number of flights; the level of cargo activity; and maintenance of aircraft, GSE, and other ground vehicles are forecast to increase over baseline conditions. It is assumed that hazardous materials, waste storage, and generation would increase in accordance with the forecast increase in aircraft, cargo, and maintenance operations.

Hazardous waste generated at FLL is collected by waste haulers and transported to one of 13 hazardous material transfer stations located throughout Broward County (See Appendix N, *Hazardous and Waste Materials*, Section 4.1.4.1, *Hazardous Waste Transporters and Transfer Stations*). Based on the available capacity at these facilities, the estimated increase in hazardous waste generated at FLL with Alternatives B1, B1b, and B1c is not anticipated to impact the handling and disposal capacity of these facilities.

The increase in the use and storage of hazardous materials and generation of hazardous waste anticipated at FLL could potentially increase the chances of a spill or unintended release of hazardous materials. The RCRA, OSHA, and SPCC plans for each of the airport's facilities detail the requirements and guidelines for handling

and storing these materials. The SPCC plans also include guidelines for worker training and emergency response. Adherence to these guidelines and continual worker training at each facility would reduce the possibility of an unintended release of hazardous materials.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons.

Hazardous Building Materials: As described in Chapter Five, Section 5.G.1.2, a review of available file information identified asbestos containing materials that were removed during previous building renovations and demolition. The file review did not reveal any site-specific occurrences of other common hazardous building materials, such as lead-based paints and polychlorinated biphenyls (PCBs). However, these and other potentially hazardous materials (listed below) could be encountered during future phases of building demolition:

- Asbestos containing materials;
- Batteries for emergency lighting, exit signs, security systems and alarms;
- Lead based paint;
- Lead pipes;
- Lead roof flashings;
- Mercury containing lamps, switches and thermostats; and
- Polychlorinated biphenyls (PCBs) in lighting ballasts and transformers.

Alternatives B1, B1b, and B1c would require demolition of some of the tenant facilities on the east and west sides of the airport. Prior to any renovation or demolition activities at on-airport facilities, appropriate surveys of the building(s) would need to be conducted. The presence of any of the materials listed above would need to be identified within a building prior to demolition, in accordance with the best management practice (BMP) guidelines provided by the BCEPD Pollution Prevention and Remediation Division and by the Florida DEP.

Hazardous building materials removed from on-airport facilities would be collected by a licensed contractor familiar with the handling of such materials. Materials such as mercury-containing lamps, switches and thermostats, batteries, lead pipes, and lead roof flashings can be disposed of at the appropriate recycling facilities. Non-recyclable materials would be transported by a licensed contractor to a hazardous waste disposal facility. Any hazardous materials removed during demolition would be handled and disposed of in accordance with Chapter 62-730 of the Florida Administrative Code (FAC and any other applicable Federal, state and local regulatory requirements).

The amount of hazardous materials to be removed from the demolished buildings is not expected to be great. Implementation of Alternatives B1, B1b, and B1c would not generate amounts of hazardous building materials that would reduce the available capacity of existing recycling or waste disposal facilities.

Petroleum-Impacted Sites and Leaking Underground Storage Tanks (LUSTs): Under Alternatives B1, B1b, and B1c, some of the tenant facilities along the east and west sides of the airport may potentially be impacted. Petroleum contamination has been documented along the east side at the former car rental facilities and the terminal area, and along the west side at the Fort Lauderdale Jet Center, the Fed Ex facility, and the county electrical field vault.

While on-airport areas of petroleum contamination have been identified, a contamination assessment has not been conducted for the entire airport. Future construction activities within the impacted areas should be conducted with the assumption that these areas are still potentially contaminated with petroleum products. Source removal plans, dewatering plans, and contamination assessment plans would be prepared for construction work within these areas. Also, worker safety guidelines for dealing with potentially contaminated material would be drafted and enforced prior to any work being conducted in these areas.

Construction activities performed in non-documented areas of impact would be conducted with the plans, guidelines, and precautions as if dealing with an impacted area. When proceeding with construction, demolition, or excavation activities, it would be assumed that underground storage tanks, aboveground storage tanks, fuel pump stations, and fuel farms located throughout FLL would have the most potential for contamination.

Environmental site assessment data at FLL will continue to be updated and revised as suspected areas of petroleum or other hazardous materials are identified when construction activities are initiated. Updated documentation would be coordinated with the appropriate regulatory agencies prior to construction.

The construction management practices and work plans would follow the guidelines of the Florida Department of Transportation specification entitled "Section 20 Excavation and Embankment – Subarticle 120-1.2, Unidentified Areas of Contamination of the Standard Specifications for Road and Bridge Construction." If an area of contamination is identified, all work should cease and the appropriate authorities should be contacted. Dewatering would be avoided where possible to reduce the potential for cross-contamination from undocumented areas of contamination to clean areas in and around the site. Dewatering activities performed onsite must first be approved by the South Florida Water Management District (SFWMD) and the BCEPD.

Prior to initiating construction-related activities, coordination with the various regulatory agencies would be completed to verify the regulatory requirements or guidelines of each agency. Detailed site-specific plans would be completed to tailor the preventative measures to the current site conditions or those that might occur during construction.

The information presented in this section is provided as a guideline for the methodology and regulations to be followed; it is not a work plan for construction activities. Each individual contractor would develop and complete their required

plans and assessments as related to the site-specific conditions. Coordination with the regulatory agencies and acquisition of any necessary permits should be done prior to initiating any site activities to ensure that the BMPs are being followed.

Storage Tanks and Fuel Facilities: Under Alternative B1, B1b, and B1c, some of the tenant facilities along the east and west sides of FLL are anticipated to be relocated to the west side development area. The two main facilities, the Broward County Aircraft Rescue Fire Fighting Station and Fort Lauderdale Jet Center Sheltair, are listed as having storage tanks onsite. The Sheltair facility fuel farm would not be relocated under Alternatives B1, B1b, and B1c.

During the removal of the storage tanks, tank removal guidelines/regulations must be adhered to as provided by the Florida DEP and BCEPD, to prevent petroleum releases. Previous fuel leakage from the supporting pipelines may be discovered during removal of the tanks and would require localized source removal and soil disposal. The impacts of tank removal would be minor.

Relocation of fuel storage tanks potentially increases the risk of contamination at a new location. Relocation of the tanks provides the opportunity to upgrade the tank safety systems, secondary containment, and piping. Improved containment methods would reduce the potential for contamination at the new location. Installation, operation, and maintenance of the new and existing fuel containment and pipe lines would be conducted in accordance with Chapter 62-762 of the FAC.

To respond to the growth forecast for FLL, increased amounts of fuel would be transported and discharged to meet the forecast demand. Materials such as paint, liquid adhesives, fuel, degreasers, and cleaners brought onto the project during construction activities should be located in a controlled and monitored environment to reduce accidents and spills. By adhering to the requirements and guidelines detailed in RCRA, OSHA, and site-specific SPCC plans, the potential for spills and unintended releases would be reduced. Adherence to these guidelines and continual worker training at each facility would reduce the possibility of an unintended release of hazardous materials.

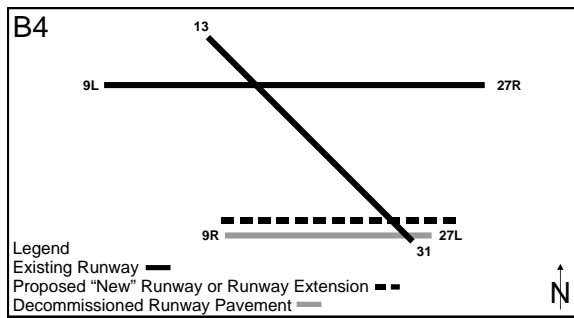
The proposed changes in the location of fuel facilities and tanks along with the forecast increase in fuel usage would not have a significant impact on the airport's fueling operations and facilities.

Dredge and Fill Material: Alternatives B1, B1b, and B1c include construction of an elevated runway, extending over U.S. Highway 1 and the Florida East Coast (FEC) Railway along the east side of the airport. Fill material is required to support the elevated runway. As proposed by Broward County and if available, dredged sediment from Port Everglades could be used as fill material for the runway.¹ The use of this material would be further evaluated during the design phase of the project.

¹ On March 23, 2001, the U.S. Army Corps of Engineers published a Federal Register notice of *Intent to Prepare a Draft Environmental Impact Statement (DEIS) for a Feasibility Study of Navigation Improvements at Port Everglades, Broward County, FL*. Work continues on the preparation of this DEIS.

Alternatives B1, B1b, and B1c would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

6.G.1.3.3 ALTERNATIVE B4: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



Hazardous Materials/ Waste Generation: The anticipated hazardous waste impacts for Alternative B4 are the same as for Alternatives A, B1, B1b, and B1c.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons

Hazardous Building Materials: The anticipated impacts to hazardous building materials for Alternative B4 are the same as for Alternatives B1, B1b, and B1c.

Petroleum Impacted Sites and Leaking Underground Storage Tanks (LUSTs): The anticipated impacts on existing petroleum impacted sites and LUSTs for Alternative B4 are the same as for Alternatives B1, B1b, and B1c.

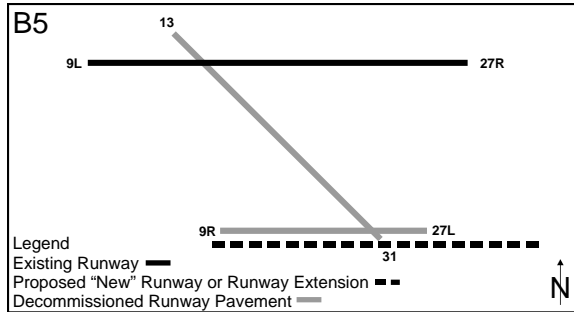
Storage Tanks and Fuel Facilities: The anticipated impacts on fuel storage tanks and fuel facilities for Alternative B4 are the same as for Alternatives B1, B1b, and B1c.

Dredge and Fill Material: Dredged or fill materials would be required for construction of Alternative B4. Dredged sediment from Port Everglades could be used as fill material for the runway.² The use of this material would be further evaluated, during the design phase of the project.

Alternative B4 would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

² The United States Army Corps of Engineers is currently performing an Environmental Impact Statement (EIS) for Port Everglades, for which a draft report is anticipated to be completed by fall of 2007.

6.G.1.3.4 ALTERNATIVE B5: BUILD A 7,800-FOOT ELEVATED RUNWAY WITH EMAS LOCATED 320 FEET SOUTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



Hazardous Materials/Waste Generation: The anticipated hazardous waste impacts for Alternative B5 are the same as Alternatives A, B1, B1b, B1c, and B4.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons

Hazardous Building Materials: The anticipated impacts to hazardous building materials for Alternative B4 are less than expected with Alternatives B1 and B4. Terminal 4 and the Sheltair facility are not expected to be impacted under this alternative, but other facilities would need to be relocated along with demolition of existing structures.

Petroleum Impacted Sites and Leaking Underground Storage Tanks (LUSTs): The anticipated impacts on existing petroleum impacted sites and LUSTs for Alternative B5 are the same as Alternatives B1 and B4.

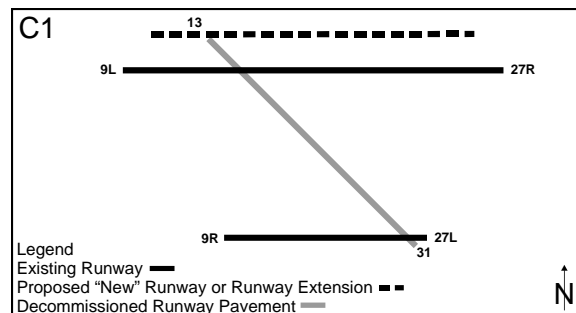
Storage Tanks and Fuel Facilities: The anticipated impacts on fuel storage tanks and fuel facilities for Alternative B5 are the same as Alternatives B1 and B4.

Dredge and Fill Material: Alternative B5 includes construction of an elevated runway, extending over U.S. Highway 1 and the FEC Railway along the east side of the airport. Fill material is required to support the elevated runway. As proposed by Broward County, and if available, dredged sediment from Port Everglades could be used as fill material for the runway.³ The use of this material would be further evaluated, during the design phase of the project.

Alternative B5 would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

³ The United States Army Corps of Engineers is currently performing an Environmental Impact Statement (EIS) for Port Everglades, for which a draft report is anticipated to be completed by fall of 2007.

6.G.1.3.5 ALTERNATIVE C1: BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (A DEPENDENT PARALLEL RUNWAY TO EXISTING RUNWAY 9L/27R)



Hazardous Materials/Waste Generation: The anticipated hazardous waste impacts for Alternative C1 are the same as Alternatives A, B1, B1b, B1c, B4, and B5.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons.

Hazardous Building Materials: Implementation of Alternative C1 requires relocation of the tenants and demolition of the buildings on the north airfield. As described under Alternatives B1, B1b, and B1c, appropriate surveys of the building(s) would need to be conducted prior to demolition to identify the presence or absence of hazardous building materials. If present, these materials would need to be removed prior to construction, in accordance with BMP guidelines provided by the BCEPD Pollution Prevention and Remediation Division and by the Florida DEP.

Hazardous building materials removed from on-airport facilities would be collected by a licensed contractor familiar with the handling of such materials. Materials such as mercury-containing lamps, switches and thermostats, batteries, lead pipes, and lead roof flashings can be disposed of at the appropriate recycling facilities. Non-recyclable materials would be transported by a licensed contractor to a hazardous waste disposal facility. Any hazardous materials removed during demolition would be handled and disposed of in accordance with Chapter 62-730 of the FAC and any other applicable Federal, state and local regulatory requirements.

Petroleum Impacted Sites and Leaking Underground Storage Tanks (LUSTs): Alternative C1 includes demolition of all tenant facilities within the north and east airfields. Petroleum contamination has been documented along the east side at the former car rental facilities and the terminal area, and along the west side at the Fort Lauderdale Jet Center, the Fed Ex facility and the County electrical field vault. Facilities with documented contamination along the north side include Aircraft Services International Group (ASIG) and Walkers Aviation Services. The consolidated rental car facilities are not expected to be impacted by this alternative.

Construction or excavation work for this alternative would need to be conducted with the assumption that these areas are potentially contaminated with petroleum products. The ASIG facility and the Fort Lauderdale Jet Center (Sheltair) are fuel farms and store large quantities of fuel onsite. These facilities would be expected to have a higher potential for petroleum impacts. As described under Alternatives B1, B1b, and B1c, source removal and contamination assessment plans would need to be prepared for areas around the airport that would be affected by the proposed activities. The historic use of the site and the contaminants would need to be identified. Contingency plans for the handling and disposal of contaminated soils would need to be developed in coordination with Broward County prior to initiating any excavation activities.

Environmental site assessment data at FLL will continue to be updated and revised as suspected areas of petroleum or other hazardous materials are identified when construction activities are initiated. Updated documentation would be coordinated with the appropriate regulatory agencies prior to construction.

The construction management practices and work plans would follow the guidelines of the Florida Department of Transportation specification entitled "Section 20 Excavation and Embankment – Subarticle 120-1.2 Unidentified Areas of Contamination of the Standard Specifications for Road and Bridge Construction." If an area of contamination is identified, all work should cease and the appropriate authorities should be contacted. Dewatering would be avoided where possible to reduce the potential for cross-contamination from undocumented areas of contamination to clean areas in and around the site. Dewatering activities performed onsite must first be approved by the SFWMD and the BCEPD.

Prior to initiating construction-related activities, coordination with the various regulatory agencies would be completed to verify the regulatory requirements or guidelines of each agency. Detailed site-specific plans would be completed to tailor the preventative measures to the current site conditions or those that might occur during construction.

The information presented in this section is provided as a guideline for the methodology and regulations to be followed; it is not a work plan for construction activities. Each individual contractor would develop and complete their required plans and assessments as related to the site-specific conditions. Coordination with the regulatory agencies and acquisition of any necessary permits should be done prior to initiating any site activities to ensure that the BMPs are being followed.

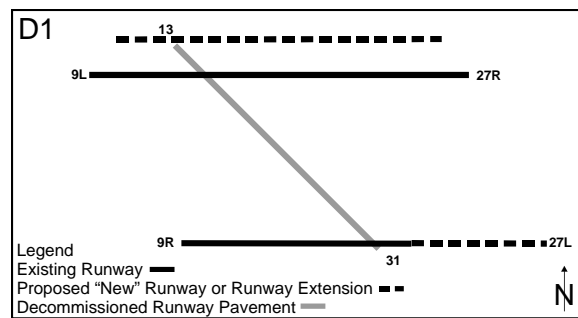
Storage Tanks and Fuel Facilities: Tenant relocation within the north and east airfield areas requires removal and relocation of a number of fuel storage tanks and associated fuel farms. These facilities would be relocated on-airport. During the removal of the storage tanks, tank removal guidelines/regulations must be adhered to as provided by the Florida DEP and BCEPD, to prevent petroleum releases. Previous fuel leakage from the supporting pipelines may be discovered during removal of the tanks and would require localized source removal and soil disposal. The impacts of tank removal would be minor.

Relocation of fuel storage tanks potentially increases the risk of contamination at a new location. Relocation of the tanks provides the opportunity to upgrade the tank safety systems, secondary containment, and piping. Improved containment methods would reduce the potential for contamination at the new location. Installation, operation, and maintenance of the new and existing fuel containment and pipe lines would be conducted in accordance with Chapter 62-762 of the FAC.

To respond to the growth forecast for FLL, increased amounts of fuel would be transported and discharged to meet the forecast demand. Also, materials (such as paint, liquid adhesives, fuel, degreasers, cleaners) brought onto the project during construction activities should be located in a controlled and monitored environment to reduce accidents and spills. By adhering to the requirements and guidelines detailed in RCRA, OSHA, and the facility SPCC plans, the potential for spills and unintended releases would be reduced. Adherence to these guidelines and continual worker training at each facility would reduce the possibility of an unintended release of hazardous materials.

Alternative C1 would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

6.G.1.3.6 ALTERNATIVE D1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO 8,000 FEET AND BUILD A NEW 7,721-FOOT RUNWAY NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B1b AND C1)



Hazardous Materials/Waste Generation: The anticipated hazardous waste impacts for Alternative D1 are the same as for Alternatives A, B1, B1b, B1c, B4, B5, and C1.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons

Hazardous Building Materials: Construction of Alternative D1 requires relocation of the tenants and demolition of the buildings on the north airfield and is expected to have the same impacts as Alternatives B1b and C1, combined.

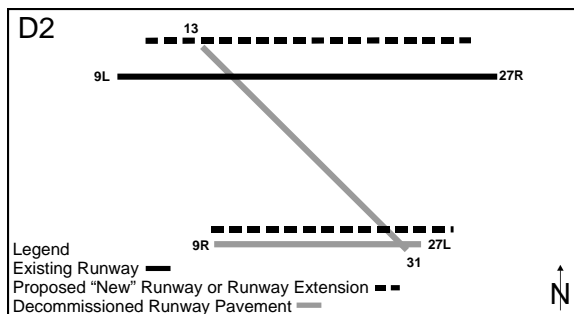
Petroleum-Impacted Sites and Leaking Underground Storage Tanks (LUSTs): Implementation of Alternative D1 is expected to have the same impacts on existing petroleum-impacted sites and LUSTs as Alternatives B1b and C1, combined.

Storage Tanks and Fuel Facilities: Implementation of Alternative D1 is expected to have the same impacts on existing storage tanks and fueling facilities as Alternatives B1b and C1, combined.

Dredge and Fill Material: Construction of Alternative D1 is expected to have the same impacts on dredged and fill materials as Alternatives B1b and C1, combined.

Alternative D1 would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

6.G.1.3.7 ALTERNATIVE D2: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY AND BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B4 AND C1)



Hazardous Materials/Waste Generation: The anticipated hazardous waste impacts for Alternative D2 are the same as for Alternatives A, B1, B1b, B1c, B4, B5, and C1.

Table 6.G.1-1, *Hazardous Waste Projections* (located at the end of this section), provides the estimated quantities of hazardous materials and wastes to be used, generated, and stored at FLL for the 2012 and 2020 planning horizons

Hazardous Building Materials: Construction of Alternative D2 requires relocation of the tenants and demolition of the buildings on the north airfield and is expected to have the same impacts as Alternatives B4 and C1, combined.

Petroleum-Impacted Sites and Leaking Underground Storage Tanks (LUSTs): Implementation of Alternative D2 is expected to have the same impacts on existing petroleum-impacted sites and LUSTs as Alternatives B4 and C1, combined.

Storage Tanks and Fuel Facilities: Implementation of Alternative D1 is expected to have the same impacts on existing storage tanks and fueling facilities as Alternatives B4 and C1, combined.

Dredge and Fill Material: Construction of Alternative D2 is expected to have the same impacts on dredged and fill materials as Alternatives B4 and C1, combined.

Alternative D2 would have minimal impacts on the storage, release, and generation of hazardous wastes; existing petroleum-impacted sites and LUSTs; fuel storage tanks and fuel facilities; and dredged and fill materials.

6.G.1.4 Environmental Impact Summary

Based on the assessment of alternatives, including the No Action Alternative, it is anticipated that the storage, release, and generation of hazardous wastes; impact on existing petroleum-impacted sites and LUSTs; relocation of fuel storage tanks and fuel facilities; and use dredged and fill materials could increase at FLL. The existing hazardous waste disposal facilities would be able to accommodate the forecast increase in the amount of hazardous waste generated by operations and construction activity at FLL.

The construction of any one of the runway development alternatives would not result in a significant increase in the amount of hazardous waste generated and would have no impact on the available capacity of existing waste disposal facilities.

**Table 6.G.1-1-1
 HAZARDOUS WASTE PROJECTIONS
 Fort Lauderdale-Hollywood International Airport**

Waste Material	Units	Total Airport - Hazardous Waste Quantities in Units per Year												
		Year 2004	Alternatives for Year 2012											
		Baseline	A	B1	B1b	B1c	B4	B5	C1*	D1*	D2*			
Tires	each	5,730	6,420	6,420	6,420	6,420	6,420	6,420	6,420	6,420	6,420	6,420	6,420	6,420
Oil Filters	each	4,440	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970	4,970
Oily Rags	each	6,260	7,010	7,010	7,010	7,010	7,010	7,010	7,010	7,010	7,010	7,010	7,010	7,010
Hydraulic Oil	gal	1,000	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Used Oil	gal	39,510	44,250	44,250	44,250	44,250	44,250	44,250	44,250	44,250	44,250	44,250	44,250	44,250
Unleaded Fuel	Million gal	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Aviation Fuel	Million gal	218.4	244.7	244.7	244.7	244.7	244.7	244.7	244.7	244.7	244.7	244.7	244.7	244.7
Diesel	gal	427,010	478,250	478,250	478,250	478,250	478,250	478,250	478,250	478,250	478,250	478,250	478,250	478,250
Motor Oil	gal	94,710	106,080	106,080	106,080	106,080	106,080	106,080	106,080	106,080	106,080	106,080	106,080	106,080
Paint/Solvent	gal	2,190	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450
Parts Cleaner/ Mineral Spirits	gal	1,260	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410	1,410
Batteries	each	350	390	390	390	390	390	390	390	390	390	390	390	390
Antifreeze	gal	370	410	410	410	410	410	410	410	410	410	410	410	410

Table 6.G.1-1, Continued
 HAZARDOUS WASTE PROJECTIONS
 Fort Lauderdale-Hollywood International Airport

Waste Material	Units	Total Airport - Hazardous Waste Quantities in Units per Year											
		Year 2004	Alternatives for Year 2020										
		Baseline	A	B1	B1b	B1c	B4	B5	C1*	D1*	D2*		
Tires	each	5,730	7,680	7,680	7,680	7,680	7,680	7,680	7,680	7,680	7,680	7,680	7,680
Oil Filters	each	4,440	5,950	5,950	5,950	5,950	5,950	5,950	5,950	5,950	5,950	5,950	5,950
Oily Rags	each	6,260	8,390	8,390	8,390	8,390	8,390	8,390	8,390	8,390	8,390	8,390	8,390
Hydraulic Oil	gal	1,000	1,340	1,340	1,340	1,340	1,340	1,340	1,340	1,340	1,340	1,340	1,340
Used Oil	gal	39,510	52,940	52,940	52,940	52,940	52,940	52,940	52,940	52,940	52,940	52,940	52,940
Unleaded Fuel	Million gal	1.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Aviation Fuel	Million gal	218.4	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7
Diesel	gal	427,010	572,190	572,190	572,190	572,190	572,190	572,190	572,190	572,190	572,190	572,190	572,190
Motor Oil	gal	94,710	126,910	126,910	126,910	126,910	126,910	126,910	126,910	126,910	126,910	126,910	126,910
Paint/Solvent	gal	2,190	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930
Parts Cleaner/ Mineral Spirits	gal	1,260	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
Batteries	each	350	470	470	470	470	470	470	470	470	470	470	470
Antifreeze	gal	370	500	500	500	500	500	500	500	500	500	500	500

Notes:

"- ." indicates a zero value for the item.

Hazardous waste projections are calculated based on airport operations increase (FAA Terminal Area Forecast, November 2006)

* Percentage of hazardous materials use/storage and hazardous waste generation occurs at off-airport locations.