4.0 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

4.1 Inventory of Exposed Materials

This sub-section contains an inventory of the potentially exposed materials found on-site. These materials are handled, stored, processed, treated or disposed of in a manner that potentially allows exposure to precipitation or storm water runoff. The potentially exposed materials found at DAL are listed below.

- Fuels and Fuel Additives
- Solvents, Degreasers, Cleaners, Hydraulic Fluids, Lubricants, Transmission Fluids, Anti-Freeze, Propylene Glycol, and Inspection Agents
- Paints, Paint Thinners, Adhesives
- Metal Products (i.e. scrap metal)
- Rubber Products (i.e. tire residue)
- Herbicides, Pesticides, Insecticides, Fertilizers
- Waste Products
- Anti-Icing Agents (i.e. NAAC, sand)
- Surfactants/Detergents
- Fire Fighting Agents

The inventory includes DOA facilities and information received from tenant facilities. *Exhibit 1*, *Exhibit 2* and *Appendix I* show the location of the materials and the direction of flow to the final permitted outfalls. An inventory of potentially exposed materials and a site map indicating the location of the material and the direction of flow for each tenant is contained in *Appendix I*.

The inventory shall be updated by the responsible party (either the DOA or the tenant), within 30 days following a significant change in the types of materials that are exposed to precipitation or runoff, or significant changes in material management practices that may affect the exposure of materials to precipitation or runoff. A significant change in the types of materials is exposure of a material, not already included in the inventory that could be transported by precipitation or storm water runoff and subsequently discharged. A significant change in material management practices is a change that would result in either initial exposure of a material not already listed in the inventory, or increased exposure of a

material to the extent that the material could be transported by precipitation or storm water runoff and subsequently discharged.

4.1.1 Fuels

Jet-A and AvGas (100LL) fuel is used to power aircraft, and is stored in underground storage tanks (USTs) at DAL. Aircraft are fueled at the terminals and hangars by a combination of a hydrant system and fuel trucks. Some fixed-base operators (FBOs) have their own USTs for fueling, while others have fueling services provided by another operator. This fueling occurs primarily in Drainage Basins B, D, I, J, P, and R. Unleaded gasoline and diesel are also contained on the airport property in Drainage Basins B, D, J, P, and R for use with ground vehicles. These fuels are particularly common in fuel bays for rental car facilities. The DOA has several gas carts containing unleaded gasoline and diesel stored at its maintenance facility in Drainage Basin R. There are also seven emergency generators located in Drainage Basins P and R. All of the generators have aboveground storage tanks (ASTs) containing diesel. The locations of these generators are shown on *Exhibit 1*.

4.1.2 Solvents, Hydraulic Fluids, Etc.

Solvents, degreasers, cleaners, hydraulic fluids, transmission fluids, anti-freeze and lubricants are often used in aircraft and ground vehicle maintenance activities located in Drainage Basins A, B, D, I, J, K, M, P, and R. Aircraft engine maintenance involves fluid changes and parts or engine replacement. Aircraft body and under-carriage work encompasses the hydraulic system, braking system, and associated mechanical components. Aircraft maintenance activities may occur inside a hangar, outside on a ramp area, or, when necessary, at the respective departure gate. If maintenance is not performed indoors or under covered areas, the materials described above can potentially become exposed to storm water runoff when good housekeeping practices are not followed.

Ground vehicle maintenance or equipment used in maintenance activities may also use solvents, degreasers, transmission fluids, anti-freeze or hydraulic fluids. If the maintenance of ground support equipment or vehicle maintenance is performed in an uncovered area, these fluids can potentially contaminate storm water runoff when safeguards are not implemented.

4.1.3 Paints, Paint Thinners, and Adhesives

In addition to aircraft maintenance, aircraft refurbishment and structural inspection may also occur on-site at the airport in Drainage Basins A, D, I, J, L, P, and R. These types of activities may include painting of aircraft parts or interior cabin retrofits. Gulfstream has a paint booth at its facility for full body painting of aircraft. Multiple tenants have small permitted paint booths for minor painting of parts. Materials used in support of refurbishment include solvents, paint thinners, paints, adhesives, or agents used during inspection of structural and engine components of aircraft to locate hairline cracks.

4.1.4 Metallic and Rubber Products

Often, airport operators recycle metal and rubber products in large, open containers, or operators may store used surplus material or equipment in a salvage area. Since these materials are generally stored uncovered, they come into contact with precipitation. For example, the recycling containers may trap and temporarily hold rainwater, allowing for direct contact of the rainwater with scrap materials. As the rainwater slowly escapes through cracks or crevices of the container, it may carry with it paint particles or other types of contaminants. Material storage areas are located in Drainage Basins D, O, P, and R and are shown in *Appendix I*.

4.1.5 Herbicides, Pesticides, Insecticides, and Fertilizers

Herbicides, pesticides, insecticides, or fertilizers are generally used by DOA in Drainage Basins E, H, J, P, Q, and R on airport grounds, parking ramps, and taxiways during landscape maintenance activities. Prior to any application of herbicide, weather forecasts are checked for any predicted precipitation: rainfall is a contraindication for herbicide application. Small quantities of herbicides, pesticide, insecticide, and fertilizers are stored in the main maintenance building until used. Commercial roach or rodent exterminators are used under contract by a few airport operators to spray inside offices, and are the only known exception to the above.

4.1.6 Waste Products

Waste oil and materials considered to be hazardous waste are routinely collected and stored under cover at various facilities within DAL located in Drainage Basins A, B, D, I, J, K, M, P, and R. Licensed

hazardous waste disposal contractors remove these materials on a periodic basis. In addition, numerous tenants have oil/water separators at their facilities. The oil/water separators are registered with TCEQ, inspected routinely, and the waste material is disposed of by licensed contractors on an as-needed basis.

Solid waste dumpsters and compactors are utilized throughout the DOA and tenant areas at DAL. Dumpsters and compactors are covered and are unlikely to come into contact with precipitation if waste containers are used properly. Liquid discharges from waste material inside dumpsters and compactors are prohibited from draining into the airport storm drain system. Commercial waste contractors remove materials on a periodic basis. Locations of waste containers are shown in *Appendix I.*

4.1.7 Deicing/Anti-Icing Agents

Aircraft deicing operations are performed at a small scale (less than 100,000 gallons of glycol used per annum) at DAL due to the prevailing mild temperatures of the area. These operations occur in Drainage Basins B, D, I, J, P, and R. When aircraft deicing is required, propylene glycol is used and it is performed outside of the hangars. Potassium acetate and/or sodium acetate (liquid and solid variations) is used for runway, taxiway, and ramp deicing. Deicing agents are typically stored in ASTs located in Drainage Basins P and R. An anti-icing agent (i.e., NAAC) is occasionally used on roadways and sidewalks, which are located in most of the drainage basins. When used, NAAC is applied sparingly on sidewalks and removed by a sweeper as soon as conditions permit. For participants and Locations see DAL deicing plan.

4.1.8 Surfactants/Detergents

Surfactants are used in aircraft, ground vehicle or equipment-washing activities. Washing activities may occur outside at a dedicated washrack facility, or inside a hangar. Dry wash activities may occur in covered or uncovered outside areas. The outside washing activities occur in Drainage Basins I, J, K, P, and R. Outside wash waters are prohibited from entering the airport storm drain system. The washing activities within the hangars and the car rental tenants are drained by an underground conduit that is connected to an oil/water separator, which is connected to the sanitary sewer system. Sometimes degreasers or emulsifiers are used in conjunction with the surfactants. Equipment subject to cleaning operations are located in Drainage Basins D, I, J, K, P, and R.

4.1.9 Fire Fighting Agents

Aqueous film-forming foam (AFFF) and Halitron are generally used by the Dallas Fire Department (DFD) on airport grounds for use in fire fighting activities. These materials are stored at Station No. 21 and No. 42, located in Drainage Basins J and R, respectively.

4.2 Narrative Description of Activities Potentially Contributing Pollutants

Potential pollutant sources originating from industrial activities can be found in both DOA and tenant activities. These activities are summarized below and elaborated in the following subsection.

4.2.1 City of Dallas and Department of Aviation Activities

The DOA maintains a SPCC Plan. DOA personnel perform facility, airfield, grounds maintenance and operations duties. As a part of those duties, maintenance workers paint runways and taxiways; mow; sweep runways, taxiway, apron, and parking area pavement surfaces; and clean-up small spills. DOA vehicles are fueled either off-site, with a gas cart containing unleaded or diesel gasoline, or using the 20,000 gallon UST containing diesel. Gas carts are stored under cover when not in use and each cart contains a spill kit. DOA uses materials, such as fuel, lubricants, paint, adhesives, cleaners, solvents, fertilizer, pesticides, herbicides, and associated applicators. These materials are usually stored in covered facilities when not in use, thereby reducing contact with storm water.

Initially, the materials, with Material Safety Data Sheets (MSDS), if applicable, are received and warehoused near the general aviation terminal area, in the DOA office suite. The structural controls at DOA-operated facilities provide for adequate exterior chemical storage and transfer locations. Such structural controls include roofs or overhanging loading areas, walls, and containment facilities.

Material handling and usage results in waste products. Used oil is kept in covered drums that are stored on secondary containment. Spent solvents are kept in covered containers and stored on secondary containment while waiting for pick-up and proper disposal off-site by a licensed contractor. Equipment for pesticide or herbicide spraying is kept indoors when not in use. Chemical/material storage areas are

indicated in *Appendix I.* There is a vehicle wash rack and Oil/Water Separator in the vicinity of the storage area. The wash rack discharges to the sanitary sewer system.

The debris from sweeping runways, taxiway, and apron areas is placed in a covered dumpster and is picked up and disposed of by a waste management contractor.

4.2.1.1 Runway Activities

Routine runway maintenance and cleaning activities provide for safe aircraft take-off and landing. The primary objective is to provide a surface with good friction characteristics in all types of weather. The DOA maintenance crews use sweepers to collect debris on runways, taxiways, and apron areas. The debris is either recycled where practicable or placed into containers for pick-up and disposal by a commercial waste collection contractor.

Runway pavement deterioration results from the action of airport traffic and the gradual effects of weathering. Runway contaminants, such as rubber deposits, dust particles, paint markings, aircraft fuel, and oil spillage, decrease the frictional property of the pavement when wet. During wet conditions, heavy rubber deposits can cover runway pavement texture, thereby causing loss of aircraft braking and directional control capabilities.

If necessary, DOA or its contractor may apply an alkaline soap to rubber deposits that accumulate on the runway surface. After the rubber deposits soften, high-pressure water is applied, followed by a water truck that rinses the residue off the runway. Cements, joint sealers, crack fillers, or asphalt patching materials are used to repair cracks, joint seal damage, spalling, and other surface pavement defects. Paint is removed by high-pressure water. Routine runway maintenance activities conducted by DOA or its contractors may generate some of the potential pollutants given in *Table 4.1*.

Table 4.1 - Runway Maintenance Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS
Surface Cleaning (ramps, taxiways and runways)	Grit/Suspended Solids Fuel Combustion Residues Oil and Grease Rubber Particles Surfactants (BOD)

Runway Painting	Paint Fragments (Lead/Chromium) Sand

4.2.1.2 Aircraft Firefighting/Training

Six fire truck and/or hazardous material trucks, dedicated to runway incidents, are maintained by the City of Dallas on DAL property in an alert status. These vehicles are held in readiness on the northwest side of the field (see *Appendix I*). Periodic training is necessary to keep those personnel assigned duties as firefighters in top proficiency. Most training activities are conducted with potable water. During an actual emergency, both water and AFFF would be used to combat the emergency. All chemicals used for firefighting and training are controlled and contained. Firefighting/Training may generate some of the potential pollutants given in *Table 4.2*. Every effort must be made to ensure that AFFF used in training procedures does not go down the storm drain.

Table 4.2 - Aircraft Firefighting/Training Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS		
Aircraft Firefighting Training Activities	Toluene Benzene Ethylbenzene Xylene Trimethyl Benzene	Aromatic Naphtha Naphthalene Hexalene Glycol Methyl Isobutyl Ketone	Propoxylate Alcohols Polyalkoxylate Amide Ignitable Wastes
	Petroleum Hydrocarbons Aqueous Film-Forming Foam (AFFF) Potassium Bicarbonate (Purple K)		

4.2.2 Airport Tenant Activities

4.2.2.1 Airport Tenant Operators With SIC Code 45 (Transportation By Air)

Airport tenant operators and contractors conduct a number of aviation functions on airport property. Examples of industrial activities performed by tenants or contractors at the airport include aircraft, vehicle, and equipment maintenance, painting, or refurbishing; aircraft, vehicle, and equipment fueling, washing, and cleaning; aircraft deicing; outdoor open storage; loading and unloading; and on-site waste collection. Operator industrial activities may occur in tenant-lease areas or at DOA facilities. Tenant or contractor areas generally contain maintenance facilities, loading/unloading areas and outdoor material

storage areas. A list of tenants with SIC Code 45 and that perform industrial activities on-site at the airport is contained in *Table 4.3*. This table summarizes these airport tenant operators with specific industrial activity.

Table 4.3 - Airport Tenants With SIC Code 45 Associated With Industrial Activity

OPERATORS			
AT&T Inc. [5] 4581	Flight Proficiency [5] 4581	MLT Development Co. [4] SIC 4581	Trinity Industries SIC 4522
Bombardier Aerospace SIC 4581	Gulfstream [2] SIC 4581	Pinnacle [3] 4512	
Business Jet Center [6] SIC 4581	Hill Air[5] 4581	Raytheon SIC 4581	
Continental SIC 4512	Holly Corporation SIC 4522	Signature Flight Support SIC 4581	
Dean Foods [7] SIC 4522	Jet Aviation Texas, Inc. SIC 4581	Southwest Airlines SCI 4512	
Exxon Mobile[5] 4581	Landmark Aviation SIC 4581	Textar [5] SIC 4581	

[2] Subtenant of Signature Flight Support has separate NOI. (Lemmon Ave Facility)
[3] Subtenant of American Airlines and Continental has separate NOI.
[4] MLT Development and its subtenants maintain their own SWPPP.
[5] Subtenant of MLT Development Co. has separate NOI.
[6] Business Jet Center has an individual permit issued by TCEQ
[7] Dean Foods has a No Exposure Certification with the TCEQ for this facility

Explanation of SIC Codes:

- SIC 4512 Air Transportation, Scheduled
- SIC 4513 Air Courier Service
- SIC 4522 Air Transportation, Unscheduled
- SIC 4581 Airports, Flying Fields, and Service

4.2.2.2 Airport Tenant Operators With Non-SIC Code 45

Airport tenant operators and contractors conduct a number of aviation-related and other functions on airport property. Examples of industrial activities performed by tenants or contractors at the airport include aircraft, vehicle, and equipment maintenance, painting, or refurbishing; aircraft, vehicle, and equipment fueling, washing, and cleaning; outdoor open storage; loading and unloading; and on-site waste collection. Operator industrial activities may occur in tenant-lease areas or at DOA facilities. Tenant or contractor areas generally contain maintenance facilities, loading/unloading areas and outdoor material storage areas. A list of tenants with non-SIC Code 45 and that perform industrial activities on-site at the airport is contained in *Table 4.4*. This table summarizes these airport tenant operators with

specific industrial activity.

Table 4.4 - Airport Tenants With Non-SIC Code 45 Associated With Industrial Activity

OPERATORS			
Associated Air (Sector AB) SIC 3721	Gulfstream [2] (Sector AB) SIC 3721	Sky Tanking [1] (Sector P) SIC 5171	

[1] Subtenant of Southwest Airlines filing separate NOI.
[2] Aviation Place Facility

Explanation of SIC Codes:

- SIC 3721 Aircraft
- SIC 5171 Petroleum And Petroleum Products

Only those industrial activities with respective BMPs that are discussed in Section 5 of this SWPPP are allowed to be conducted on airport property. All other industrial activity that has the potential to adversely impact the quality of storm water runoff will only be allowed to be conducted on airport property if an associated site-specific BMP(s) has been developed for the activity.

Table 4.5 is a summary of tenant activities conducted at DAL.

Table 4. 5 - Summary of Tenant Activities

OPERATOR	FACILITY ACTIVITY																	
	Maintenance				Washing			Storage						Fuels		Deicing		Controls
	AM	EM	VM	PN	AW	EW	VW	AG	CS	HW	L/U	OL	UG	FD	AF	AD	AI	OS
Associated Air Center	I	I	I	I				O	I	I	O	I			O			YES
Avis Rent-a-Car		I	I			I	I		I		O	I	O	I				YES
Bombardier Aerospace	I	I		I					I	I	I	I		I/O*	O*			YES
Business Jet Center	I	I	I		I	I	I	O*	I	I	I	I	O	O	O	O	O	YES
Business Jet Access	I	I	I	I	I	I			I	I	I	I	O	O	O			YES
Continental									I						O†	O†	O†	
Dean Foods																		
DFD Station No. 21				I			O*	O	I					O				
DFD Station No. 42				I			O*	O	I					O				
Enterprise Car Rental		I	I			I	I		I		O	I	O	I				
Gulfstream	I/O	I/O	I/O	I		I		O	I/O	I	O	I			O			YES
Hertz Car Rental			I				I	O	I/O		I	I	O	O				YES
Holly Corporation	I	I	I		I				I			I			O†			
Jet Aviation Texas, Inc.	I	I			I	I	I	O	I	I	O	I	O	O	O			YES

"I" Industrial Activity Conducted Under Covered Area or Indoors
"O" Industrial Activity Conducted Without Cover Outdoors
"O* " Industrial Activity Conducted Without Cover Outdoors and Either Drains to Sanitary Sewer System or is Collected and Disposed of Properly
"O- " Industrial Activity Conducted Without Cover Outdoors: Rinse Off Only, No Soap
“O† ” Industrial Activity Conducted Without Cover Outdoors by a third party

AD Aircraft Deicing/Anti-Icing Operations
AF Aircraft Fueling Operations
AG Aboveground Storage Tank
AI Ramp Deicing/Anti-Icing Operations
AM Aircraft Maintenance and Refurbishing
AW Aircraft Washing Operations
CS Chemical Storage
EM Equipment Maintenance
EW Equipment Degreasing or Washing
FD Fuel Dispatching, Distribution, or Handling
HW Hazardous Waste Handling or Temp. Storage
L/U Loading/Unloading Areas
OL Temporary Storage of Oil or Antifreeze
OS Oil Water Separator
PN Painting Aircraft, Vehicles, Equipment, or Parts
UG Underground Storage Tank
VM Vehicle Maintenance
VW Vehicle Washing

Table 4. 5 - Summary of Tenant Activities (cont.)

OPERATOR	FACILITY ACTIVITY																	
	Maintenance				Washing			Storage						Fuels		Deicing		Controls
	AM	EM	VM	PN	AW	EW	VW	AG	CS	HW	L/U	OL	UG	FD	AF	AD	AI	OS
Landmark Aviation									I	I	O	I	O	O	O			YES
MLT Development Co																		
Pinnacle	O		O								O				O†	O†	O	
Raytheon	I				O*					I								YES
Signature Flight Support	I				I	O			I	I	O	I	O	O	O	O*		YES
Dalfort Fueling	I	I	I		I	I	I	O	I	I	O	I	O	O	O	O	O	
Sky Tanking		I	I	I		O*	O*	O*	I	I	O*	I		O	O			YES
Southwest Airlines	I	I		I	O*		I	I/O	I	I	I/O			O	O	O	O	YES
Trinity Industries	I	I	I		I				I	I		I			O†			

"I" Industrial Activity Conducted Under Covered Area or Indoors
"O" Industrial Activity Conducted Without Cover Outdoors
"O* " Industrial Activity Conducted Without Cover Outdoors and Either Drains to Sanitary Sewer System or is Collected and Disposed of Properly
"O- " Industrial Activity Conducted Without Cover Outdoors: Rinse Off Only, No Soap
“O† ” Industrial Activity Conducted Without Cover Outdoors by a third party

AD Aircraft Deicing/Anti-Icing Operations
AF Aircraft Fueling Operations
AG Aboveground Storage Tank
AI Ramp Deicing/Anti-Icing Operations
AM Aircraft Maintenance and Refurbishing
AW Aircraft Washing Operations
CS Chemical Storage
EM Equipment Maintenance
EW Equipment Degreasing or Washing
FD Fuel Dispatching, Distribution, or Handling
HW Hazardous Waste Handling or Temp. Storage
L/U Loading/Unloading Areas
OL Temporary Storage of Oil or Antifreeze
OS Oil Water Separator
PN Painting Aircraft, Vehicles, Equipment, or Parts
UG Underground Storage Tank
VM Vehicle Maintenance
VW Vehicle Washing

4.2.2.3 Airport Tenant Operators Not Defined as Storm Water Discharges Associated with Industrial Activity

There are a number of operators performing maintenance or industrial activities that are not in *Table 4.5* and are not required to apply for a TPDES Storm Water General Permit to cover regulated discharges because their SIC codes are not specifically defined in the regulations as storm water associated with industrial activity. Industrial activities performed by these operators, such as car rental and regulatory establishments, must also be addressed. Provisions of the lease typically require that these tenants follow all applicable environmental regulations. A list of this category of airport operators at DAL is contained in *Table 4.6*.

Table 4.6 - Airport Tenant Operators Not Defined In Regulations as Storm Water Dischargers Associated with Industrial Activity

OPERATORS	
Avis Car Rental	Dallas Fire Department – Station No. 21
Enterprise Car Rental	Dallas Fire Department – Station No. 42
Hertz Car Rental	

4.2.3 DOA and Tenant Activities

4.2.3.1 Tenant Aircraft Activities

The following information generally pertains to tenant areas or common use airport areas. DOA participation in a given activity will be specifically noted below.

Aircraft activities include maintenance and cleaning of aircraft engines, chassis, or bodies; refurbishment or installation of aircraft interiors and cabinetry; refurbishment of brakes or electronic equipment; lubrication or fluids replacement; and aircraft washing and painting. These activities also include maintenance or cleaning of instruments, equipment, or work areas used to service aircraft. Aircraft awaiting maintenance (storage areas) are located where aircraft maintenance occurs in hangars.

As maintenance is performed on aircraft, leaks or spills of hydraulic fluids, lubricating materials, solvents, degreasers, paint strippers, and other materials may occur. Aircraft maintenance or storage activities may generate some of the potential pollutants given below. Whenever possible, maintenance at DAL is performed inside the maintenance hangar and is, therefore, not exposed to precipitation.

4.2.3.2 Fueling Operations

Fueling operations occur primarily in Drainage Basins B, D, I, J, P, and R. One large fuel farm, managed by Sky Tanking for tenant Southwest Airlines (located in Drainage Basin P), consists of 3, 420,000 gallon ASTs and serves much of the commercial aviation needs at DAL through a hydrant fuel delivery system. There are several other Fixed Base Operators (FBOs) that operate smaller fuel farms with USTs of various sizes on airport property. These FBOs are located in Drainage Basins B, D, I, J, P, and R. In addition, ground service equipment and other gasoline and diesel-driven vehicles are in operation at DAL, so several of these FBOs maintain USTs containing diesel and unleaded gasoline as well. Several car rental companies (such as Hertz, Avis, Enterprise) have leaseholds at DAL, and each one operates its own fuel bay, with USTs for diesel and unleaded gasoline. DFD Station Nos. 21 and 42 both maintain PSTs containing diesel. The DOA fuels its equipment (mowers, etc.) with mobile fuel tanks in drainage basins that have grass. *Table 4.7* summarizes the quantities and types of fuel stored at each of the above-referenced facilities. Fueling operations may generate some of the potential pollutants given in *Table 4.8*.

Table 4.7 - Fuel Storage at DAL

OPERATOR		QUANTITY	TYPE	DRAINAGE BASIN	FUEL TRUCKS
Avis Rent-A-Car		1 – 15,000 gallon UST	Gasoline	R	NO
Business Jet Center	Center	2 – 30,000 gallon USTs 1 – 12,000 gallon UST 1 – 4,000 gallon UST 1 – 500 gallon AST	Jet A AvGas Gasoline Diesel	B	YES
	Access	2 – 12,000 gallon USTs 1 – 1,000 gallon UST	Jet A AvGas	P	YES
Dallas Fire Station No. 21 Dallas Fire Station No. 42		1 – 1,000 gallon AST 1 – 1,000 gallon AST	Diesel	J	NO
Department of Aviation		1 – 20,000 gallon UST 1 – 1,400 gallon AST 1 – 200 gallon AST* 2 – 1,300 gallon AST 2 – 1,000 gallon AST 3 – 300 gallon MASTs 1 – 300 gallon MAST	Diesel Diesel Gasoline	P R	NO NO
Enterprise Car Rental		2 – 11,500 gallon USTs 1 – 8,000 gallon UST	Gasoline Bio-Diesel	R	No
Federal Aviation Administration		1 – 2,000 gallon AST	Diesel	R	NO
Hertz Car Rental		2 – 10,000 gallon USTs 1 – 6,000 gallon UST	Gasoline Diesel	R	NO
Jet Aviation Texas, Inc.		7 – 12,000 gallon USTs 1– 12,000 gallon UST 1 – 12,000 gallon UST 1- 10,000 gallon UST	Jet A AvGas Gasoline Waste Fuel	R	YES
Landmark Aviation		3 – 12,000 gallon USTs	Jet A	P	YES
MLT Development Co.	North	4 – 20,000 gallon USTs 2 – 15,000 gallon USTs	Jet A AvGas	I	YES
	South	4 – 20,000 gallon USTs	Jet A	R	
Raytheon		2 – 500 gallon AST 2- 750 gallon AST	Diesel	P	No
Signature Flight Support	North	4 – 48,000 gallon USTs 2 – 20,000 gallon USTs 1 – 20,000 gallon UST 1- 1,000 gallon UST	Jet A Diesel Gasoline Off-Spec	P	YES

	South	6 – 20,000 gallon USTs 2 – 10,000 gallon USTs 1 – 10,000 gallon USTs	Jet A AvGas Gasoline	R	
Sky Tanking		3 – 420,000 gallon ASTs 2– 12,000 gallon ASTs 1 – 8,000 gallon AST	Jet A Gasoline/Diesel Waste Fuel	P	YES
Southwest Airlines		2- 500 gallon ASTs 2- 500 gallon ASTs	Used Oil Diesel	K	YES

* not in use

Table 4.8 - Fueling Operations Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS
Aircraft Fueling (including storage tanks and fueling areas)	Lead Toluene Benzene Ethylbenzene Xylene Trimethyl Benzene Aromatic Naphtha Naphthalene Ignitable Wastes Petroleum Hydrocarbons Propoxylate Alcohols Polyalkoxylate Amide Methyl Isobutyl Ketone Jet-A AvGas Unleaded Gasoline Diesel Antioxidants (Variations of Dimethylphenol or Butylphenol) Fuel System Icing Inhibitor (Ethylene Glycol Monomethyl Ether) Corrosion Inhibitors

4.2.3.3 Ground Vehicle and Equipment Maintenance and Cleaning

Ground vehicle and equipment maintenance and cleaning activities by DOA and tenants provide for engine or chassis rebuilding; parts rebuilding, replacement, cleaning or painting; lubrication/fluids or fluid lines replacement; body work, or vehicle cleaning. These activities include maintenance or cleaning of instruments, equipment, or work areas used for the service of ground vehicles. As these activities are performed, lubricating materials, hydraulic fluids, solvents, degreasers, paint strippers, or other materials

may leak or spill onto the work floor. Materials used to clean up spills or leaks are of concern and require proper storage and disposal methods. Vehicles awaiting maintenance (storage areas) are located where maintenance occurs in maintenance buildings or on adjacent parking areas, as indicated in the legend as *Vehicle or Equipment Maintenance or Storage Areas* on the individual tenant site maps in *Appendix I*. Ground vehicles and equipment maintenance may generate some of the pollutants given in *Table 4.9*.

Table 4.9 - Vehicle and Equipment Maintenance Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS		
Aircraft Facility Maintenance, Refurbishing, or Painting	Cadmium Mercury Acetone Toluene Benzene Arsenic	Chromium Selenium Reactive Wastes Tetrachloroethylene Barium Oil and Grease	Lead Silver Spent Acids Chlorobenzene Methyl Ethyl Ketone (MEK)
Vehicle or Equipment Maintenance, Parts or Fluids Replacement	Cadmium Mercury Chlorobenzene Toluene Benzene Methylene Chloride	Chromium Selenium Barium Tetrachloroethylene Arsenic Surfactants (BOD)	Lead Acetone Silver Ignitable Wastes Spent Acids
	Petroleum Hydrocarbons (Lubricants, Hydraulic Fluids) Waste Oils/Antifreeze		
Vehicle or Equipment Fueling (including storage tanks and fueling areas)	Xylene Toluene Benzene Ethylbenzene Methyl Isobutyl Ketone	Trimethyl Benzene Aromatic Naphtha Naphthalene Hexalene Glycol	Petroleum Hydrocarbons Propoxylate Alcohols Polyalkoxylate Amide Ignitable Wastes
Aircraft Washing	Oil and Grease	Surfactants (BOD)	
Vehicle or Equipment Washing or Steam Cleaning	Surfactants (BOD) Oil and Grease Suspended Solids		
Floor Cleaning	Surfactants (BOD) Oil and Grease	Fuel Contaminants Paint	

	Suspended Solids	Solvents (Toluene/Acetone/Methylene Chloride)

4.2.3.4 Aircraft and Runway Deicing/Anti-Icing Operations

Deicing is a procedure by which frost, ice, or snow is removed from the aircraft or runway in order to provide clean surfaces. This procedure can be accomplished by the use of fluids, by mechanical means, or by heating the aircraft. Anti-icing is a procedure by which the application of certain types of anti-icing fluids provides protection against the formation of frost or ice or the accumulation of snow on treated surfaces of the aircraft or taxiways for a limited period of time (holdover time). When runway deicing/anti-icing is necessary, only a minimal amount of material is applied to the runways.

Federal Aviation Administration (FAA) regulations state that each domestic, flag, supplemental air carrier and commercial operator are responsible for operational control. In order to properly exercise operational control when conditions at an airport are such that frost, ice, or snow may reasonably adhere to the aircraft, a management plan is used to ensure proper execution of the airport's deicing/anti-icing program. A check is conducted to ensure that the wings, instrument control surfaces, and other critical surfaces, such as propellers, engine intakes, and fuel vents, are free of frost, ice, or snow.

The recording of information concerning the use of deicing and anti-icing is maintained by each tenant, and is periodically compiled. Deicing or anti-icing operations may generate some of the potential pollutants given in *Table 4.10* below.

Table 4.10 - Deicing and Anti-Icing Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS
Aircraft Deicing	Propylene Glycol (BOD)
Anti-icing of Sidewalks Pedestrian Areas, or Landside Bridges	Washed Sand (Suspended Solids) NAAC (Solid)
Runway, Taxiway, or Ramp Anti-Icing	Potassium Acetate (BOD) Sodium Acetate (BOD)

4.2.3.5 Outdoor Storage Activities

Chemical materials are sometimes stored in drums, containers, or tanks at covered or uncovered storage areas. These containers shall be securely closed and stored on spill pallets or in some manner of appropriate secondary containment. Materials stored in drums or containers may be opened and periodically accessed, or they may be waste products awaiting later transport and disposal. Outdoor storage facilities include conduits, piping, valves, or other distribution system components associated with the drums, containers or tanks. Storage and handling equipment used in conjunction with the stored materials is also included; for example, pesticide sprayers or fertilizer spreaders are stored adjacent to the vehicle maintenance facility in a covered facility. Outdoor storage activities may generate some of the potential pollutants given in *Table 4.11*.

Table 4.11 - Outdoor Storage Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS
Storage tanks including ASTs, USTs, drums and containers	Petroleum Hydrocarbons Non-Halogenated Hydrocarbons Solvents (Toluene/Acetone/Methylene Chloride) Oil and Grease Propylene Glycol (BOD) Fuel Additives
Bulk chemical and equipment storage areas	Surfactants (BOD) Bulk Fertilizer Bulk Pesticides/Herbicide and Equipment Petroleum Hydrocarbons Oil and Grease

4.2.3.6 Loading and Unloading Operations

Material loading, unloading, and transport operations are closely related to outdoor storage activities. Chemical materials are routinely loaded and unloaded at DOA and tenant facilities. Fuel transporting tankers, forklifts, and hand lifting are all methods used in loading and unloading operations at these facilities. These operations may occur at outdoor storage areas, aircraft, or tank farm locations. Occasionally, a spill may occur as a result of loading or unloading activities. If so, the party that causes

the spill is responsible for spill response and reporting to the appropriate authority, clean-up, and proper disposal of all contaminated or waste material. Loading and unloading operations may generate some of the potential pollutants given in *Table 4.12*.

Table 4.12- Materials Handling Potential Pollutants

ACTIVITY	POTENTIAL POLLUTANTS
Transport, loading and unloading of materials	Petroleum Hydrocarbons Halogenated Hydrocarbons Solvents (Toluene/Acetone/Methylene Chloride) Oil and Grease Propylene Glycol (BOD) Surfactants (BOD) Bulk Fertilizer/Pesticide/Herbicide and Equipment Cleaners Potassium Acetate (BOD) Sodium Acetate (BOD)

4.3 Spills and Leaks

The SWPPP Addendum contains a list of significant spills and leaks of toxic or hazardous materials that occurred in areas that are exposed to precipitation or that may otherwise drain to the storm water drainage system at DAL for the past three years. For spill reporting procedures, see Airport Emergency Plan. Significant spills required to be listed in the SWPPP Addendum, are releases of oil, fuels or hazardous substances in excess of quantities that are reportable under Section 311 of the Clean Water Act or Section 102 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Locations of these significant spills are shown in *Appendix I*. This list will be updated on a quarterly basis. Records of this list shall be kept for five years in the SWPPP Addendum

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4.4 Sampling Data

Annual wet-weather monitoring for metals is required by the TPDES MS General Permit. The annual wet-weather metals monitoring is the responsibility of the DOA and will be recorded on Discharge Monitoring Reports (DMRs) using Environmental Protection Agency (EPA) Form 3320-1 or equivalent, which will be made available to TCEQ upon request. Benchmark monitoring (for BOD, COD, ammonia and pH) is not required, since DAL's combined activities do not utilize more than 100 tons of urea or 100,000 gallons of deicing chemicals per year. All sampling data shall be evaluated annually, at a

minimum, during the site compliance evaluation process. Sampling data may be found in *Appendix G*.

Samples collected during the annual wet-weather metals monitoring shall be analyzed for the following constituents:

- Arsenic
- Barium
- Cadmium
- Chromium
- Copper
- Lead
- Manganese
- Mercury
- Nickel
- Selenium
- Silver
- Zinc

Wet-weather monitoring procedures are the same as for the quarterly visual monitoring, which is discussed in *Section 5.9.1*.

The DOA will collect samples at the facility outfalls. When applicable tenants shall file a hazardous metals monitoring waiver for the permit term and a copy of the completed waiver must be submitted to the DOA for filing.