



LOS ANGELES WORLD AIRPORTS	
SC1	ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAINS
<p>PURPOSE:</p> <p><i>Existing discharges:</i> Eliminate non-storm water discharges to the storm water collection system. Non-storm water discharges can be classified as follows: 1) <i>Activity-based</i> (subtle), and 2) <i>Overt</i> (hard pipe connection). Activity-based non-storm water discharges may include: wash water, deicing fluids, and spillage. Overt non-storm water discharges may include: process wastewater, treated cooling water, and sanitary wastewater.</p> <p><i>Prevention of illicit connections:</i> Prevent improper physical connections to the storm drain system from sanitary sewers, floor drains, industrial process discharge lines, and wash racks through education, developing project approval conditions, and performing both construction phase and post-construction inspections.</p> <p>GENERAL APPROACH:</p> <p style="text-align: center;"><i>Identification of Activity-Based (Subtle) Discharges:</i></p> <p>The following techniques may be used to identify activity-based non-storm water discharges to the storm water collection system:</p> <ul style="list-style-type: none"> ■ Perform frequent activity inspections to identify non-storm water discharges - stagger inspection times to cover all work periods. ■ Perform visual inspections of discharge points to the storm drain system - observe uncharacteristic volumes, colors, turbidity, odors, deposition, staining, floatables, and foaming characteristics of any flow. <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Perform inspections during the design review and project construction phases to ensure drainage, wastewater, and water supply connections are correct (no cross connections or illicit hookups). ■ Develop a set of as-built prints for all projects. Keep a set of the prints at the facility. ■ Design projects to include adequate waste repositories at locations near waste origin points. ■ Provide adequate and appropriately designed facilities for functions such as steam cleaning, degreasing, painting, mechanical maintenance, chemical/fuel storage and delivery, material handling, waste handling and storage, lavatory service, and food preparation. 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> All Maintenance All Fueling All Washing Equipment Cleaning Cargo Handling All Storage Painting/Stripping Floor Washdowns Aircraft Deicing/Anti-Icing Garbage Collection Aircraft Lavatory Service Fire Fighting Equip. Testing Potable Water System Flush Runway Rubber Removal <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Oil and Grease Vehicle Fluids Fuel Solvents/Cleaning Sol. Deicing/Anti-Icing Fluid Battery Acid Pesticides/Herbicides/ Fertilizers Paint Aircraft Fire Fighting Foam Metals Dumpster Wastes Sediment Landscape Waste Floatables Lavatory Chem. Wastes Potable Water System Chemicals Rubber Particles <p>KEY APPROACHES</p> <ul style="list-style-type: none"> Perform inspections and enforcement Provide training for employees Promote education of vendors/public



LOS ANGELES WORLD AIRPORTS

SC1

ELIMINATION OF NON-STORM WATER DISCHARGES TO STORM DRAIN

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- Use "dry" cleaning and surface preparation techniques where feasible.
- Limit the availability of outdoor water supplies (hose bibs).
- Post signs at outdoor water sources stating the appropriate uses and discouraging uses which would introduce pollutants to the storm drain system/receiving waters.

Contingency Response

- Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan, if required under guidelines set forth in 40 CFR, Section 112.3(a), (b).
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.

Inspection and Training

- Inspect waste containers frequently for leaks and proper closure seal.
- Develop employee training programs which emphasize the proper disposal procedures for operations-derived wastes.
- Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management.

REQUIREMENTS:

- Capital and O&M costs associated with the elimination of non-storm water discharges can be high.

LIMITATIONS:

- Storm drain documentation for many facilities is not up-to-date.
- Activity-based (subtle) non-storm water discharges from a particular facility are typically sporadic, transient, and often require frequent inspections to detect.

RELEVANT RULES AND REGULATIONS:

- Industrial Activities Storm Water General Permit, April 17, 1997
- .40 CFR 110.3 Discharge of Oil
- .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans)
- .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- .40 CFR 122-124 NPDES Regulations for Storm water Discharges
- .40 CFR 401 Effluent Limitation Guidelines



LOS ANGELES WORLD AIRPORTS	
SC2	AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from aircraft, vehicle, and equipment maintenance and repair, including ground vehicle and equipment painting/stripping and floor washdowns.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Provide covered maintenance areas when designing new facilities or upgrading existing facilities. Utilize indoor areas, lean-tos, or portable covers. ■ Locate outdoor maintenance areas so minimal quantities of runoff cross the site. ■ Include appropriate storm water quality structures (oil/water separators, sumps, first flush diversion basins, etc. - see TC-1 for further information regarding treatment control BMPs) in the design of outdoor maintenance areas. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <p>Implement the following to the maximum extent practicable.</p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Use drip pans. ■ Use absorbent materials at potential problem areas. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner. ■ Drain and crush oil filters (and oil containers) before recycling or disposal. Store crushed oil filters and empty lubricant containers in a leak-proof container - covered if outdoors. ■ Label storm drain inlets to indicate they are to receive no wastes. Do not hose down work areas to the storm drainage system or use concrete cleaning products unless the storm drain inlet is blocked and wash water is collected and properly disposed of through a permitted sewer connection. As an alternative, use mops, dry sweeping compound, or contract professional cleaning services. Confirm the use of appropriate disposal practices by contract cleaning services. ■ Drain and properly dispose of all fluids and remove batteries from salvage aircraft, vehicles, and equipment. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft Maintenance</p> <p>Vehicle Maintenance</p> <p>Equipment Maintenance</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Oil and Grease</p> <p>Vehicle Fluids</p> <p>Solvents/Cleaning Solutions</p> <p>Fuel</p> <p>Battery Acid</p> <p>Paint</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Conduct maintenance indoors, or in covered area.</p> <p>Prevent wash water discharges to the storm drain</p> <p>Clean catch basins regularly</p> <p>Collect and properly dispose of all fluids</p>



LOS ANGELES WORLD AIRPORTS	
SC2	AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE
<p><i>Good Housekeeping, cont.</i></p> <ul style="list-style-type: none"> ■ Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters. ■ Use biodegradable products and substitute materials with less hazardous properties where feasible. <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> ■ Where feasible, move maintenance activities indoors or provide cover over work area. ■ Use designated washing, steam cleaning, and degreasing areas to clean equipment. ■ Store mechanical parts and equipment that may yield even small amounts of contaminants (e.g., oil or grease) under cover and away from drains. <p><i>Structural Controls</i></p> <ul style="list-style-type: none"> ■ Equip maintenance and cleaning areas with runoff controls that prevent discharge to storm sewers. ■ Install and maintain catch basin filter inserts that assist in the removal of oil and grease, sediments and floatables. <p><i>Maintenance</i></p> <ul style="list-style-type: none"> ■ Maintain clean equipment by eliminating excessive amounts of external oil and grease buildup. Use water-based cleaning agents or non-chlorinated solvents to clean equipment. ■ Regularly clean any catch basins that receive runoff from a maintenance area, especially after larger storms. ■ Inspect, clean and maintain sump and oil/water separators, if necessary. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. ■ Furnish all maintenance vehicles with adequate supplies of spill response materials and appropriate spill response procedures. <p style="text-align: center;"><i>Inspection and Testing</i></p> <ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. ■ Provide employee storm water quality awareness training. ■ Develop regular maintenance and inspection programs for oil/water separators. ■ Characterize wastes collected from oil/water separators. Provide appropriate employee training. <p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Capital and O&M costs should be low but will vary depending on the size of the facility. Costs associated with diversion basins can be high. ■ Maintenance costs should be low. 	



LOS ANGELES WORLD AIRPORTS	
SC2	AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE
<p>LIMITATIONS:</p> <ul style="list-style-type: none"> ■ Size, space and time limitations may preclude all work being performed indoors. ■ Identification of engine and equipment leakage points may require the use of solvents or other cleaners to remove external accumulations of oily grime. 	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC3	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING
<p>PURPOSE:</p> <p>Prevent fuel spills and leaks, and reduce their impacts to storm water.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Design fueling areas to prevent the run-on of storm water and the runoff of spills by employing the following approaches: <ul style="list-style-type: none"> - Cover the fueling area if possible. - Use a perimeter drain or slope the fueling area to a dead-end sump or oil/water separator. - Pave the fueling area with concrete rather than asphalt. ■ If storm water runoff from fueling areas is not collected, install an appropriately sized oil/water separator. Regulatory agency approvals are required. ■ Install and maintain vapor recovery systems where required and/or appropriate. ■ Existing underground fuel storage tanks should be upgraded with leak detection, spill containment, and overfill protection in advance of December 22, 1998, the federal regulatory deadline. This is relevant to storm water regulations due to the potential for contamination of surface soils or waters that could be transported by storm water runoff. ■ Design facilities to include secondary containment where required and/or appropriate. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p><i>Operational Considerations</i> Implement the following to the maximum extent practicable.</p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Fuel pumps intended for vehicular use (not aircraft) should be posted with signs stating "No Topping Off" to prevent overflow. ■ Use absorbent materials and spot cleaning for small spills; do not hose down the area unless the storm drain is blocked and drainage is collected by vacuum truck and disposed of through a permitted connection to the sanitary sewer. ■ Properly dispose of any fuel spills and leaks. Vacuum equipment/trucks are recommended for collection. Always dispose of materials in an approved manner; use an approved treatment facility through a permitted connection. Never discharge materials to a catch basin or storm drain. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft Fueling</p> <p>Vehicle Fueling</p> <p>Equipment Fueling</p> <hr/> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Fuel</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Install berms or curbing around fueling areas</p> <p>Use absorbent materials and/or vacuum equipment for spills</p> <p>Install proper equipment for fuel dispensing and tank monitoring to prevent spills, leaks and overflows</p>



LOS ANGELES WORLD AIRPORTS

SC3

AIRCRAFT, GROUND VEHICLE AND EQUIPMENT FUELING

Good Housekeeping (contd.)

- Use pigs/mats over catch basins during fueling activity.
- Manage the disposal of water that collects in fuel tanks and fueling hydrant sumps according to state and federal regulations.

Physical Site Usage

- Avoid mobile fueling of equipment wherever feasible; fuel equipment at designated fueling areas.

Structural Controls

- Cover the fueling area if possible.
- Divert storm water runoff away from fueling area to avoid storm water contact with contaminated surfaces through the use of berms or curbing.
- Install gate valves at catch basins for use during fueling activity.
- Employ secondary containment or cover when transferring fuel from a tank truck to a fuel tank.

Equipment

- Provide appropriate monitoring for tanks containing fuel, such as:
 - Level indicators and gauges.
 - Overfill protection with alarms.
 - Interstitial leak detection for double-walled tanks.
 - Routine inspection/lockout for drainage valves for tank containment areas.
- Fuel dispensing equipment should be equipped with "breakaway" hose connections that will provide emergency shutdown of flow should the fueling connection be broken through movement.
- Automatic shut-off mechanisms should be in place on fuel tankers. These valves should remain in the closed position unless manually opened during fueling.

Maintenance

- Inspect, clean and maintain sumps and oil/water separators at appropriate intervals.

Contingency Response

- Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan if required under guidelines set forth in 40 CFR, Sections 112.3(a), (b).
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.
- Furnish adequate spill response information, equipment and materials on all fueling vehicles.

Inspection and Training

- Inspect fueling areas and storage tanks regularly. Record all maintenance activities and inspections relating to fueling equipment and containers in a logbook.
- Underground fuel storage tanks should be tested as required by federal and state laws. Provide the appropriate level of spill response training to personnel to address all types of potential spills.



LOS ANGELES WORLD AIRPORTS	
SC3	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ The cost of retrofitting existing fueling areas to minimize storm water contamination can be high. Practical design concepts such as incorporating extruded curb along the upstream side of facilities to prevent run-on of storm water can be of modest cost. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Properly sized and installed oil/water separators must be regularly maintained to be effective (see TC-1 for a description of management practices relating to oil/water separator operations and maintenance). 	
RELEVANT RULES AND REGULATIONS:	
<p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC OPA/Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharge .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC4	AIRCRAFT, GROUND VEHICLE AND EQUIPMENT WASHING
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water drains from aircraft, vehicle, and equipment washing, and equipment degreasing.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Consider off-site commercial washing where feasible. Using appropriate off-site facilities will decrease the waste generated on-site. ■ Consider incorporating a wash water recycling system into the project design. ■ Outdoor washing operations should have the following design characteristics: <ul style="list-style-type: none"> - Paved with portland cement concrete. - Bermed and/or covered (if feasible) to prevent contact with storm water. - Sloped to facilitate wash water collection. - Wash water should be collected in a dead-end sump for removal or discharged to the sanitary sewer through a permitted connection. - Discharge piping serving uncovered wash areas should have a positive shut-off control valve that allows switching between the storm drain and the sanitary sewer. - Clearly designated. - Equipped with an oil/water separator designed to operate under storm water runoff conditions (treat storm water volumes and flow rates). Regulatory agency approvals are required. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <p>Implement the following to the maximum extent practicable.</p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Use "dry" washing and surface preparation techniques where feasible. Several products are presently marketed which are being used to clean even the largest aircraft. Remove all materials (i.e., drippings and residue) using vacuum methods. Dispose of properly. ■ Provide secondary containment for containers of washing and steam cleaning additives. ■ Use pigs/mats to cover catch basins during wash activity. ■ Use biodegradable phosphate-free detergents. ■ Keep washing area clean and free of waste. ■ Include proper signage to prohibit the discharge of waste oils into the drains. ■ Collect and discharge wash water to an approved treatment facility (sanitary sewer system) through a permitted connection. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft Washing</p> <p>Vehicle Washing</p> <p>Equipment Washing</p> <p>Equipment Degreasing</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Oil and Grease</p> <p>Solvents</p> <p>Vehicle Fluids</p> <p>Cleaning Solutions</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Use designated area</p> <p>Use dry washing techniques</p> <p>Recycle wash water or discharge appropriately</p> <p>Cover catch basins</p> <p>Provide training</p>



LOS ANGELES WORLD AIRPORTS

SC4 AIRCRAFT, GROUND VEHICLE AND EQUIPMENT WASHING

Physical Site Usage

- Consider off-site commercial washing and steam cleaning where feasible. Using appropriate off-site facilities will decrease the waste generated on-site.
Use designated wash areas indoors, or outdoors covered and bermed where feasible, to prevent contamination of storm water by contact with wastes.

Structural Controls

- Install gate valves at catch basins for use during washing activities to facilitate the collection of the wash water and prevent discharge to the storm drainage system.
Filter and recycle wash water where practical.

Maintenance

- Conduct berm repair and patching.
Inspect, clean, and maintain sumps, oil/water separators, and on-site treatment and recycling units.

Contingency Response

- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.

Inspection and Training

- Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management.
Develop regular maintenance and inspection programs for oil/water separators.
Characterize wastes derived from oil/water separators. Provide appropriate employee training.

REQUIREMENTS:

- Capital costs vary depending on measures implemented.
- LOW COST: \$500-1,000 for berm construction.
- MEDIUM COST: \$5,000-20,000 for plumbing modifications (including re-routing discharge to the sanitary sewer and installing a simple sump).
- HIGH COST: \$30,000-150,000 for on-site treatment and recycling.
O&M costs increase with increasing capital investment.

LIMITATIONS:

- Some wastewater agencies may require pretreatment and monitoring of wash water discharges to the sanitary sewer.
Steam cleaning and de-greasing operations can generate significant pollutant concentrations which may require permitting, monitoring, pretreatment, and inspections. These compliance issues will vary according to local agency jurisdiction.



LOS ANGELES WORLD AIRPORTS	
SC4	AIRCRAFT, GROUND VEHICLE AND EQUIPMENT WASHING
RELEVANT RULES AND REGULATIONS: Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm water Discharges .40 CFR 401 Effluent Limitation Guidelines	



LOS ANGELES WORLD AIRPORTS	
SC5	AIRCRAFT DEICING/ANTI-ICING
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from aircraft deicing and anti-icing procedures.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ When designing or modifying operating areas, consider the following characteristics: <ul style="list-style-type: none"> - Paved with portland cement concrete. - Sloped to facilitate fluid collection. - Fluids could be collected in a dead-end sump for removal or discharged to the sanitary sewer through a permitted connection (check with local wastewater agency). - Clearly designated. - Equipped with an oil/water separator. ■ Consider incorporating a closed loop recycling system into the design of deicing/anti-icing stations. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Perform anti-icing and deicing operations only in areas designated by LAWA as appropriate for such activities. ■ Depending on conditions, apply only enough fluid to surfaces to ensure the safe operation of the aircraft. Excess fluid dripped to the ground contaminates soil and water if not properly contained. ■ Clean ramp areas following deicing/anti-icing operations. Wet-type sweepers are effective in removing deicing fluids from paved areas. Dispose of or recycle the fluids in accordance with local, state, and federal regulations. ■ Implement forthcoming recommendations of the FAA technical committee on deicing. ■ Inspect, clean and maintain sumps and oil/water separators. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. <p style="text-align: center;"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Monitor deicing and anti-icing operations regularly to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety. ■ Provide the appropriate level of employee training in the following areas: spill 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft Deicing</p> <p>Aircraft Anti-Icing</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Ethylene glycol</p> <p>Propylene glycol</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Perform in designated areas only</p> <p>Apply only required amounts of fluid</p> <p>Clean ramp area when done</p> <p>Implement forthcoming recommendations of FAA</p>



LOS ANGELES WORLD AIRPORTS	
SC5	AIRCRAFT DEICING/ANTI-ICING
<i>Inspection and Training (contd)</i>	
<p>response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management.</p>	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Costs associated with the collection and proper disposal of anti-icing fluids can be high. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Wastewater agencies may ban conventional anti-icing chemicals, such as ethylene glycol, from the sanitary sewer system or may require extensive pretreatment and monitoring of deicing and anti-icing fluid discharges to the sanitary sewer. 	
RELEVANT REGULATIONS:	
<p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC6	OUTDOOR MATERIAL HANDLING
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from loading and unloading of material and cargo.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Design loading/unloading areas to prevent storm water run-on through the use of the following practices: <ul style="list-style-type: none"> - Grading or berming. - Positioning roof downspout to direct storm water away from loading/ unloading areas. ■ Design facilities so that materials which may contribute pollutants to storm water may be stored indoors or under cover. ■ Incorporate oil/water separators into exposed loading dock designs. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Use seals or door skirts between vehicles and structures to prevent material exposure to rainfall. ■ Contain and adsorb leaks during transfers and spillage from hose disconnections; dispose of residue properly. ■ Avoid transferring materials in close proximity to storm drain inlets. ■ Use drip pans under hoses. ■ Transfer liquids only in paved areas. Portland cement paving should be used if the liquid is asphalt reactive. ■ Provide contractors and haulers with copies of pertinent BMPs. Require contractors/haulers adherence to BMP specifications. ■ Consider contracting maintenance operations for material handling equipment. Designate an appropriate area for contractors to perform maintenance activities. Verify proper waste disposal practices of contractors. <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> ■ Protect all loading/unloading activities from rainfall, run-on and wind dispersal to the maximum extent practicable. Viable options include conducting loading/unloading under existing cover, or moving indoors. ■ Position tank trucks or delivery vehicles so that possible spills or leaks can be contained. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Cargo Handling</p> <p>Fuel Storage</p> <p>Chemical Storage</p> <p>Equipment Storage</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Fuel</p> <p>Pesticides/ Herbicides/ Fertilizers</p> <p>Oil and Grease</p> <p>Solvents/Cleaning Solutions</p> <p>Battery Acid</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Conduct loading/ unloading under cover</p> <p>Transfer materials in paved areas, away from storm drain inlets</p> <p>Contain and absorb leaks/spills that occur during material transfer</p>



LOS ANGELES WORLD AIRPORTS	
SC6	OUTDOOR MATERIAL HANDLING
<p><i>Structural Controls</i></p> <ul style="list-style-type: none"> ■ Cover loading/unloading areas/docks to reduce exposure of materials to rain. Construct roofing structure over material handling area, or move indoors. ■ Consider relocating storm drain inlets in areas away from fuel hydrants. <p><i>Maintenance</i></p> <ul style="list-style-type: none"> ■ Conduct berm repair and patching. ■ Inspect, clean and maintain oil/water separators. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. ■ Include spill kits on appropriate material handling vehicles and equipment. <p>Inspection and Training</p> <ul style="list-style-type: none"> ■ Conduct regular inspections and make repairs as necessary. ■ Check loading/unloading equipment (valves, pumps, flanges, and connections) regularly for leaks. ■ Develop and implement a written operations plan which describes loading/unloading procedures. ■ Provide proper training for material handling equipment operators. ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Capital and O&M costs should be low except when covering large loading/unloading areas. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Space and time limitations may preclude the indoor or covered transfer of cargo and materials. 	
RELEVANT RULES AND REGULATIONS:	
<p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm water Discharges</p>	



LOS ANGELES WORLD AIRPORTS	
SC7	OUTDOOR STORAGE OF SIGNIFICANT MATERIAL
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from outdoor storage areas for significant material (e.g., fuels, chemicals, bagged material on pallets, soils or asphalt material bulk storage, deicing compounds, etc.).</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Require the use of appropriate water quality control structures for fuel and chemical storage areas such as detention/retention basins and sumps. Develop appropriate minimum performance standards for these water quality control structures and implement a reporting program to monitor the performance and maintenance of these structures. ■ Chemical, fuel, and oil dispensing (non-aircraft) areas should be covered, if possible. ■ Develop standard guidelines for the management of storm water which collects in secondary containment areas. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p><i>Operational Considerations</i> <i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Avoid dispensing from drums positioned horizontally in cradles. Dispensing materials from upright drums equipped with hand pumps is preferred. Always use drip pans and self closing spigots if dispensing from horizontally positioned drums. ■ Store drums and containers on pallets or other structures to keep the container out of contact with storm water. ■ Use drum lids to prevent rainfall from washing materials and drippage from the top of containers to the storm drain system. ■ Discharge collected storm water from secondary containment areas according to guidelines developed by the federal government and applicable state and local regulations. ■ Store all materials in their original containers or containers approved for that use. Ensure that all containers are appropriately sealed. Store empty containers indoors or under cover or move them off-site. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft/Vehicle/ Equipment Maintenance</p> <p>Aircraft/Vehicle Fueling</p> <p>Fuel/Chemical/ Equipment Storage</p> <p>Cargo Handling</p> <hr/> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Fuel</p> <p>Solvents/Cleaning Solutions</p> <p>Deicing/Anti-Icing Fluids</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Store materials indoors or under cover</p> <p>Store drums/ containers on pallets</p> <p>Provide berming or secondary containment</p> <p>Develop/implement an SPCC, if required</p> <p>Perform and document periodic inspections</p>



LOS ANGELES WORLD AIRPORTS	
SC7	OUTDOOR STORAGE OF SIGNIFICANT MATERIAL
<p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Capital and O&M costs will vary widely depending on the size of the facility and the necessary controls. Costs associated with on-site detention/retention facilities could be high. 	
<p>LIMITATIONS:</p> <ul style="list-style-type: none"> ■ Storage structures must meet local building and applicable local Uniform Fire Code (UFC) requirements. However, spills and releases are frequently caused by improper handling rather than structural deficiencies. 	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC8	WASTE/GARBAGE HANDLING AND DISPOSAL
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from waste handling and disposal by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing run-on and runoff from waste management areas, including garbage collection areas.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ If possible, avoid the following characteristics when examining candidate sites for storing wastes: <ul style="list-style-type: none"> - Excessive slope. - High water table. - Locations near storm drain inlets. - Locations near public access areas. ■ Waste handling and storage areas should be covered, if possible. ■ Develop standard guidelines for the management of storm water which collects in secondary containment areas. ■ Incorporate sanitary sewer drains into bermed, outdoor, non-hazardous waste storage areas, if approved by the local wastewater treatment agencies/regulations. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Perform regular housekeeping activities in waste storage areas and surroundings. ■ Recycle materials whenever possible. ■ Inspect waste management areas for spills and waste management containers for leaks. ■ Ensure that sediments and wastes are prevented from being washed, leached, or otherwise carried off-site. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Fuel/Chemical Storage</p> <p>Painting/Stripping</p> <p>Garbage Collection</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Oil and Grease</p> <p>Vehicle Fluids</p> <p>Solvents/Cleaning Solutions</p> <p>Dumpster Wastes</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Cover waste storage areas</p> <p>Recycle materials</p> <p>Regularly inspect and clean waste storage areas</p> <p>Berm waste storage areas to prevent contact with run-on or runoff</p> <p>Perform dumpster cleaning in designated areas</p> <p>Properly dispose of all fluids</p>



LOS ANGELES WORLD AIRPORTS	
SC8	WASTE/GARBAGE HANDLING AND DISPOSAL
<p><i>Good Housekeeping (contd)</i></p> <ul style="list-style-type: none"> ■ Schedule waste pickup as frequently as necessary to keep storage of waste to a minimum and to avoid overloaded/overfilled disposal containers. ■ Minimize spills and fugitive losses such as dust or mist from loading areas. ■ Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation. ■ Track waste generated: <ul style="list-style-type: none"> - Characterize waste streams. - Evaluate the process generating the waste. - Prioritize the waste streams using: manifests, bills of lading, biennial reports, permits, environmental audits, SARA Title III reports, emission reports, Material Safety Data Sheets (MSDS), NPDES discharge monitoring reports. - Inventory reports. - Data on chemical spills. - Emissions. ■ Find substitutes for harmful chemicals; properly dispose of unusable chemical inventory. <p><i>Physical Site Usage</i></p> <ul style="list-style-type: none"> ■ Segregate and separate wastes. ■ Avoid locating waste handling and storage in areas with storm drain inlets/catch basins. ■ Locate waste storage areas beneath existing cover, if possible. <p><i>Structural Controls</i></p> <ul style="list-style-type: none"> ■ Enclose or berm waste storage areas, if possible, to prevent contact with run-on or runoff. <p><i>Garbage Collection Areas</i></p> <ul style="list-style-type: none"> ■ Design facilities to provide shelter and secondary containment for dumpsters. ■ Use covered dumpsters and keep them closed and locked. ■ Use only dumpsters with plugged drain holes to prevent leaks from waste materials. ■ Do not dispose of liquid wastes such as oils or hazardous materials into dumpsters. ■ Perform dumpster cleaning in designated areas that are bermed to contain wash water for a subsequent disposal or discharge to the sanitary sewer. Ramp scrubbers are effective in removing wash water from paved areas. Dispose of or recycle all fluids collected. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. ■ Equip waste transport vehicles with spill containment equipment. 	



LOS ANGELES WORLD AIRPORTS	
SC8	WASTE/GARBAGE HANDLING AND DISPOSAL
<i>Inspection and Training</i>	
<ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. ■ Perform and document in a log book periodic inspections of hazardous and non-hazardous waste storage areas. Inspection items should include the following: <ul style="list-style-type: none"> - Check for external corrosion and structural failure. - Check for spills and overfills due to operator failure. - Check for failure of piping system (pipes, pumps, flanges, couplings, hoses, and valves). - Check for leaks or spills during pumping of liquids or gases. - Visually inspect new tanks or containers for loose fittings, poor welds, and improper or poorly fitted gaskets. - Inspect tank foundations and storage area coatings. - Inspect dumpster areas for signs of leakage. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Capital and O&M costs for these programs will vary substantially depending on the size of the facility and the types of wastes handled. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Hazardous waste that cannot be re-used or recycled must be disposed of by a licensed hazardous waste hauler. 	
RELEVANT RULES AND REGULATIONS:	
Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm water Discharges .40 CFR 401 Effluent Limitation Guidelines	



LOS ANGELES WORLD AIRPORTS	
SC9	BUILDING AND GROUNDS MAINTENANCE
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance by washing and cleaning up with as little water as possible, preventing and cleaning up spills immediately, keeping debris from entering storm drains, and maintaining the storm water collection system.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Incorporate areas of landscape into project design. Landscape areas are pervious and will result in less runoff discharge from a site. ■ Incorporate design considerations such as leaving or planting native vegetation to reduce irrigation, fertilizer, and pesticide needs. ■ Select landscaping plants which require little maintenance and/or pest control. ■ Incorporate storm water detention/retention to reduce peak runoff flows and for water quality control. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <p><i>Good Housekeeping</i></p> <ul style="list-style-type: none"> ■ Collect outdoor washdown water and properly dispose of it through a permitted connection to the sanitary sewer. Approval from treatment facility required for discharge. ■ Clean any catch basins that receive runoff from maintenance areas on a regular basis. Use a vacuum truck to remove accumulated materials. Do not simply flush wastes into the storm drain system. ■ Minimize use of pesticides, herbicides, and fertilizers. Use according to directions. Seek less harmful/toxic products to replace ones currently used. ■ Utilize integrated pest management where appropriate. ■ Properly dispose of landscape waste, wash water, sweepings, and sediments. ■ Regularly clean paved surfaces that are exposed to industrial activity. Use A “dry” cleaning techniques, such as sweeping, whenever possible. 	<p>TARGETED ACTIVITIES</p> <p>Building Maintenance</p> <p>Grounds Maintenance</p> <p>TARGETED POLLUTANTS</p> <p>Pesticides/Herbicides/ Fertilizers</p> <p>Oil and Grease</p> <p>Sediment</p> <p>Landscape Waste</p> <p>KEY APPROACHES</p> <p>Keep paved surfaces cleaned and swept</p> <p>Clean catch basins regularly using vacuum trucks</p> <p>Manage use of pesticides/herbicides/ fertilizers</p>



LOS ANGELES WORLD AIRPORTS	
SC9	BUILDING AND GROUNDS MAINTENANCE
<p><i>Structural Controls</i></p> <ul style="list-style-type: none"> ■ Provide landscaped areas where erosion is becoming a problem. <p><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. 	
<p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Costs will vary depending on the type and size of the facility. Costs of on-site storm water detention/retention facility could be high. 	
<p>LIMITATIONS:</p> <ul style="list-style-type: none"> ■ Alternative pest/weed controls may not be available, suitable, or effective in every case. 	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substances .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC10	STORM WATER POLLUTION PREVENTION EDUCATION
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from activities through implementing an education program targeting employees, vendors, and the public.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Work early on with design and construction engineers, and local storm water authorities to incorporate proactive storm water management features into projects such as decreased impervious areas, infiltration BMPs, biofilters, oil/water separators, etc. ■ Inform all construction contractors of their responsibility to comply with adopted BMPs and with regulations prohibiting cross connections between sanitary sewers and storm drains. Provide contractors and subcontractors with copies of relevant BMPs during specification and bidding phases. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Provide adequate implementation training for facilities with a Spill Prevention Control and Countermeasure (SPCC) Plan, if required developed under guidelines set forth in 40 CFR, Section 112.3(a), (b). ■ Adequately train employees in the use of spill response equipment and materials. <p style="text-align: center;"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Perform and document in a logbook frequent inspections of work areas, waste storage facilities, maintenance areas, and contractor projects to examine compliance with BMPs. Follow up with additional training or enforcement as required. Incorporate inspection findings into subsequent training efforts. ■ Design storm water pollution education programs to contain the following elements: <ul style="list-style-type: none"> - Promote the proper storage, use, and disposal of landscape maintenance chemicals and other potentially harmful chemicals. - Promote the use of safer alternative products such as: short-lived pesticides, non-chlorinated solvents, water-based paints, non-aerosol products. - Encourage the use of "dry" washing processes for aircraft, vehicles, and 	<p>TARGETED ACTIVITIES</p> <ul style="list-style-type: none"> All Maintenance All Fueling All Washing Equipment Cleaning Cargo Handling All Storage Painting/Stripping Floor Washdowns Aircraft Deicing/Anti-Icing Garbage Collection Aircraft Lavatory Service Fire Fighting Equip. Testing Potable Water System Flush. Runway Rubber Removal <p>TARGETED POLLUTANTS</p> <ul style="list-style-type: none"> Oil and Grease Vehicle Fluids Fuel Solvents/Cleaning Sol. Deicing/Anti-Icing Fluid Battery Acid Pesticides/Herbicides/ Fertilizers Paint Aircraft Fire Fighting Foam Metals Dumpster Wastes Sediment Landscape Waste Floatables Lavatory Chem. Wastes Potable Water System Chemicals Rubber Particles <p>KEY APPROACHES</p> <ul style="list-style-type: none"> Perform inspections and enforcement Provide training for employees Promote education of vendors/public



equipment.	
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LOS ANGELES WORLD AIRPORTS	
SC 10	STORM WATER POLLUTION PREVENTION EDUCATION
<i>Inspection and Training (contd)</i>	
<ul style="list-style-type: none"> ■ Design storm water pollution education programs to contain the following elements: <ul style="list-style-type: none"> - Encourage efficient and safe housekeeping practices in industrial activity areas. - Increase awareness of the detrimental environmental impacts that result when fuel, antifreeze, pesticides, lubricants, detergents, paints and other wastes are dumped onto the ground or into storm drains. - Promote source reduction and recycling of waste materials. - Increase awareness of possible penalties and fines associated with discharge of pollutants into storm drains. - Increase awareness of what is and what is not allowed to enter storm drains. Provide a mechanism for violations to be reported. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Capital and O&M costs are minimal for educational programs. ■ Educational programs need to be ongoing. Information and training must be disseminated at regular intervals. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ The success of educational programs is difficult to measure. Acceptance and awareness are critical factors. 	
RELEVANT RULES AND REGULATIONS:	
Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines	



LOS ANGELES WORLD AIRPORTS	
SC11	LAVATORY SERVICE OPERATIONS
<p>PURPOSE:</p> <p>Eliminate discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities. The sanitary sewage and associated rinse waters produced during the servicing of aircraft lavatory facilities must be discharged to a wastewater treatment facility under appropriate permitting. Trucks or trailers equipped with bulk storage tanks are typically used to service lavatory facilities. Non-storm water discharges and residuals associated with servicing these facilities can be classified as follows:</p> <ul style="list-style-type: none"> ■ Discharges and residuals associated with diluting and mixing the surfactants and disinfectants used for servicing lavatory facilities. ■ Discharges and residuals associated with transferring materials from the aircraft. ■ Discharges and residuals associated with transporting and disposing materials to the sanitary sewer system. <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ If possible, design triturator facilities to be covered, with low roll-over type berming. ■ Include a source of water at the triturator for clean up of lavatory service equipment. ■ Coordinate permitting of the triturator sanitary sewer connection through the local storm water and sanitary sewer agencies. ■ Triturator facilities should not be located near storm drains. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Do not discharge lavatory waste to sanitary sewer connections other than triturator facilities. Other industrial-type connections may be equipped with bypass gates which, if improperly maintained or defective, may discharge to the storm water collection system. ■ Drain the aircraft connecting hose as completely as possible into the storage tank after servicing an aircraft. Properly secure all hoses, valves, and equipment when transporting waste to eliminate leakage and spills. ■ Use only surfactants and disinfectants approved for discharge to the sanitary sewer system. Do not discharge or rinse other unapproved chemicals or materials into the triturator facility. Any change in the chemicals used in aircraft lavatory service operations must be approved by LAWA. 	<p>TARGETED ACTIVITIES</p> <p style="padding-left: 20px;">Aircraft Lavatory Service</p> <p style="padding-left: 20px;">Lavatory Truck Cleanout/ Backflushing</p> <p>TARGETED POLLUTANTS</p> <p style="padding-left: 20px;">Lavatory Chemicals</p> <p style="padding-left: 20px;">Lavatory Waste</p> <p style="padding-left: 20px;">Lavatory Truck Wash Water</p> <p>KEY APPROACHES</p> <p style="padding-left: 20px;">Do not discharge lavatory waste to sanitary sewer connections other than triturator facilities</p> <p style="padding-left: 20px;">Utilize buckets or pans to capture drippage from aircraft lavatory access fittings</p> <p style="padding-left: 20px;">Do not perform lavatory truck cleanout/backflushing at any location other than triturator facilities</p> <p style="padding-left: 20px;">Carry absorbent and other containment equipment on the lavatory service equipment</p>



LOS ANGELES WORLD AIRPORTS	
SC11	LAVATORY SERVICE OPERATIONS
<i>Operational Considerations (contd)</i>	
<ul style="list-style-type: none"> ■ If possible, perform surfactant/disinfectant mixing and transfers in the triturator area or under cover. This will allow the rinsing of minor spills and splashes to enter the sanitary sewer system. ■ Do not perform lavatory truck cleanout/backflushing at any location other than triturator facilities. ■ Utilize buckets or pans to capture drippage from aircraft lavatory access fittings. Immediately dump the drippage into the bulk storage tank on the service cart or truck. ■ Carefully handle chemicals and chemical concentrates. Immediately collect dry chemicals or absorb liquid chemicals for proper disposal. Do not hose down spills unless the discharge enters the sanitary sewer system through a permitted connection (triturator facility). ■ Practice good housekeeping techniques at the triturator facility. Immediately clean spills of wastes and chemicals. 	
<i>Contingency Response</i>	
<ul style="list-style-type: none"> ■ Carry absorbent and other containment equipment on the lavatory service equipment. ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. 	
<i>Inspection and Training</i>	
<ul style="list-style-type: none"> ■ Perform regular inspections of the hose and fittings used for transferring lavatory waste. Keep the equipment in good working order. Replace worn equipment before leaks develop. Notify appropriate ground service personnel if it is noticed that the aircraft lavatory fittings require maintenance. ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Costs associated with the elimination of discharges resulting from aircraft lavatory servicing are generally low. Most management practices are based on careful material handling, good housekeeping, and awareness of maintenance requirements. 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Facilities may have a limited number of permitted sanitary sewer access points (triturator facilities) for a large quantity of lavatory service equipment. 	
RELEVANT RULES AND REGULATIONS:	
<p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC12	OUTDOOR WASHDOWN/SWEEPING
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water from outdoor washdown and sweeping operations.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Consider contracting apron washing/sweeping services. Using appropriate contractors will decrease waste handling responsibilities. Inform contractors of their responsibilities regarding proper disposal of sweeper and scrubber waste. Supply contractors with pertinent BMPs and operating specifications. Follow up with contractor inspections frequently. ■ Incorporate appropriate waste receiving facilities for sweepers and washing equipment. Coordinate sanitary sewer connection permitting through the local sanitary sewer agency. ■ Incorporate oil/water separators or other water quality devices into project designs. ■ Consider incorporating gate valves in areas where apron washing will occur. The gate valves will direct wash water to the sanitary sewer in dry weather and will direct storm water to the storm drain system during wet weather. Mechanical devices should be incorporated to ensure that valves are not left open (to sanitary sewer) during wet weather. Coordinate permitting and connections through the local sanitary sewer agency. ■ Employ berms to minimize run-on to other areas. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Collect and discharge wash water to the sanitary sewer system through a permitted connection. ■ Use designated and approved discharge facilities to dispose of waste derived from apron/ramp cleaning. ■ Use "dry" sweeping techniques where feasible. ■ Dispose of sweepings in an appropriate manner. ■ Conduct berm repair and patching. ■ Inspect, clean and maintain sumps and oil/water separators. 	<p>TARGETED ACTIVITIES</p> <p>Apron Washing</p> <p>Ramp Scrubbing</p> <p>Outdoor Washdown</p> <p>TARGETED POLLUTANTS</p> <p>Oil and Grease</p> <p>Solvents/Cleaning Solutions</p> <p>Fuel</p> <p>Aircraft Fire Fighting Foam</p> <p>Deicing/Anti-Icing Fluids</p> <p>Sediment</p> <p>Floatables</p> <p>KEY APPROACHES</p> <p>Collect and discharge wash water to the sewer</p> <p>Use "dry" sweeping techniques</p> <p>Dispose of sweepings</p>



LOS ANGELES WORLD AIRPORTS	
SC12	OUTDOOR WASHDOWN/SWEEPING
<i>Contingency Response</i>	
<ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur. 	
<i>Inspection and Training</i>	
<ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. ■ Develop regular maintenance and inspection programs for oil/water separators. Document inspections and maintenance in a log book. ■ Characterize wastes derived from oil/water separators. Dispose of these wastes properly and provide appropriate employee training. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Capital costs vary depending on measures implemented. <ul style="list-style-type: none"> - LOW COST: \$500-1,000 for berm construction. - MEDIUM COST: \$5,000-20,000 for plumbing modification (including re-routing discharge to the sanitary sewer and installing a simple sump). ■ O&M costs increase with increasing capital investment: 	
LIMITATIONS:	
<ul style="list-style-type: none"> ■ Some wastewater agencies may require pretreatment and monitoring of wash water discharges derived from apron washing to the sanitary sewer. 	
RELEVANT RULES AND REGULATIONS:	
<p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC13	FIRE FIGHTING FOAM DISCHARGE
<p>PURPOSE:</p> <p>Eliminate discharges to the storm drain system associated with flushing or testing of fire fighting foam systems.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Design testing facility with the following characteristics: <ul style="list-style-type: none"> - Located away from storm drain inlets, drainage facilities or water bodies. - Paved with concrete or asphalt, or stabilized with an aggregate base. - Bermed to contain foam and to prevent run-on. - Configure discharge area with a sump to allow collection and disposal of foam. ■ Discharge foam waste to a sanitary sewer. Foam waste shall not be discharged to storm drains or water bodies. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Perform fire fighting foam testing operations only in areas designated by LAWA as appropriate for such activities. ■ Properly dispose of, or recycle, foam discharge. ■ Service sump regularly. ■ Conduct berm repair and patching. ■ Inspect, clean, and maintain sumps. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near area of activity. <p style="text-align: center;"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Inspect testing facility weekly or monthly, depending on frequency of use. ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Fire Fighting Equipment Testing</p> <p>Fire Fighting Equipment Flushing</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Aircraft Fire Fighting Foam</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Perform testing operations in designated areas</p> <p>Properly dispose of, or recycle, foam discharge</p> <p>Service sump regularly</p>



LOS ANGELES WORLD AIRPORTS	
SC13	FIRE FIGHTING FOAM DISCHARGE
<p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Capital costs vary depending on measures implemented. <ul style="list-style-type: none"> - LOW COST: \$500-1,000 for berm construction. - MEDIUM COST: \$5,000-20,000 for plumbing modifications (including re-routing discharge to the sanitary sewer and installing a simple sump. ■ O&M costs increase with increasing capital investment. 	
<p>LIMITATIONS:</p> <ul style="list-style-type: none"> ■ Some wastewater agencies may require pretreatment and monitoring of this type of discharge to the sanitary sewer. 	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 122-124 NPDES Regulations for Storm water Discharges .40 CFR 401 Effluent Limitation Guidelines</p>	



LOS ANGELES WORLD AIRPORTS	
SC14	POTABLE WATER SYSTEM FLUSHING
<p>Purpose:</p> <p>Eliminate discharges to the storm drain system associated with flushing of aircraft potable water systems.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Design water truck flushing area with the following characteristics: <ul style="list-style-type: none"> - Located away from storm drain inlets or drainage facilities. - Paved with concrete or asphalt, or stabilized with an aggregate base. - Bermed to contain wastewater and to prevent run-on. - Configure discharge area with a sump to allow collection and disposal of water. ■ Discharge water to a permitted sanitary sewer connection. Waste water shall not be discharged to storm drains. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Perform water truck flushing operations only in designated areas, designed with berms to prevent run-on and runoff. Do not perform flushing near storm drains. ■ Collect all discharge from aircraft potable water flushing or water truck flushing containing Purine, chlorine bleach or other chemicals and properly discharge to a permitted sanitary sewer connection, or recycle the water. ■ Conduct berm repair and patching. ■ Inspect, clean and maintain sumps and on-site treatment and recycling units. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ■ Maintain adequate supplies of spill response equipment and materials in accessible locations near area of activity. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft potable water system cleaning and flushing Water truck cleaning and flushing</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Purine Chlorine Bleach</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Perform water truck flushing in designated areas only</p> <p>Collect all discharge from aircraft potable water flushing or water truck flushing and discharge to a permitted sanitary sewer connection</p> <p>Do not discharge water to the ground or storm drain sanitary sewer connection</p>



LOS ANGELES WORLD AIRPORTS	
SC14	POTABLE WATER SYSTEM FLUSHING
<i>Inspection and Training</i>	
<ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution educational approaches), right-to-know awareness training, and hazardous materials management. ■ Monitor flushing operations regularly to ensure that proper collection and disposal of discharge is being performed. 	
REQUIREMENTS:	
<ul style="list-style-type: none"> ■ Capital costs are low for implementation of collection system for aircraft potable water flushing. ■ For new facility, capital costs vary depending on measures implemented. <ul style="list-style-type: none"> - LOW COST: \$500-1,000 for berm construction. - MEDIUM COST: \$5,000-20,000 for plumbing modifications (including re-routing discharge to the sanitary sewer and installing a simple sump. - HIGH COST: \$30,000-150,000 for on-site treatment and recycling. - 	
LIMITATIONS	
<ul style="list-style-type: none"> ■ Some wastewater agencies may require pretreatment and monitoring of this type of discharge to the sanitary sewer. 	
RELEVANT RULES AND REGULATIONS:	
Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 122-124 NPDES Regulations for Storm Water Discharges .40 CFR 401 Effluent Limitation Guidelines	



LOS ANGELES WORLD AIRPORTS	
SC15	RUNWAY RUBBER REMOVAL
<p>PURPOSE:</p> <p>Eliminate discharges to the storm drain of particulate rubber generated by runway rubber removal activities.</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p style="text-align: center;"><i>Design of New Facilities and Existing Facility Upgrades</i></p> <ul style="list-style-type: none"> ■ Design runway storm drain culverts to allow placement of particulate capture devices, such as hay bales or filter fabric, that will capture rubber and dirt particles generated during periodic runway rubber removal activities. <p>APPROACH TO EXISTING FACILITIES ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ■ Place devices that will capture rubber particulates, such as hay bales or filter fabric, over storm drain culverts or at other areas that will capture rubber particulates generated during periodic runway rubber removal activities. ■ Use manual or mechanical cleaning methods (ordinary mechanical street sweepers) to remove rubber particulates from the runway and adjacent paved areas after periodic runway rubber removal activities. <p style="text-align: center;"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. ■ Inspect storm drain culverts or runway drainage areas after runway rubber removal activities. <p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Capital and O&M costs should be low. ■ Maintenance costs should be low 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p style="text-align: center;">Runway Rubber Removal</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p style="text-align: center;">Rubber particles</p> <p style="text-align: center;">Dirt particles</p> <p style="text-align: center;">KEY APPROACHES</p> <p style="text-align: center;">Use hay bales or filter fabric over culverts</p> <p style="text-align: center;">Use manual or mechanical cleaning methods (e.g., street sweepers) to remove particulates following normal removal process</p>
<p>LIMITATIONS:</p> <p># Runway drainage patterns may not be suitable for the collection of rubber particulates in wash water run-off.</p>	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997</p>	



L A X

Los Angeles World Airports

Rules and Regulations

.40 CFR 122-124 NPDES Regulations for Storm Water Discharges



LOS ANGELES WORLD AIRPORTS	
TC1	OIL/WATER SEPARATORS
<p>PURPOSE:</p> <p>Oil/Water separators are baffled chambers designed to remove petroleum compounds and grease from storm water. Oil/water separators also remove floatable debris and settled solids (sediment).</p> <p>APPROACH TO FUTURE FACILITIES AND UPGRADES:</p> <p><i>Design of New Facilities and Existing Facility Upgrades</i></p> <p>Oil/water separators are typically used in areas where the concentrations of petroleum hydrocarbons, floatables, or sediment may be abnormally high and source control techniques are not very effective. There are two types of oil/water separators: the American Petroleum Institute (API) separator and the coalescing plate separator (CPS). Design, sizing, and placement of oil/water separators is dependent on several factors including: tributary area, type of activity, pollutant type and concentration, and water temperature. General sizing guidelines for API separators include the following:</p> <ul style="list-style-type: none"> ▪ Horizontal velocity: 3 feet per minute. ▪ Depth of 3 to 8 feet. ▪ Depth-to-width ratio of 0.3 to 0.5. ▪ Width of 6 to 16 feet. ▪ Baffle height-to-depth ratios of 0.85 for top baffles and 0.15 for bottom baffles. <p>CPS separator sizing is more complex. Sizing calculations require the inclusion of information such as packing plate surface areas and plate angles. CPS separators can, due to their packed plate design, remove the same quantities of oils and greases while occupying less space than API separators.</p> <p>APPROACH TO EXISTING FACILITIES ACTIVITIES:</p> <p style="text-align: center;"><i>Operational Considerations</i></p> <ul style="list-style-type: none"> ▪ Separators must be inspected and cleaned frequently for accumulated oil, grease, floating debris and sediments to be effective storm water quality controls. ▪ Oil absorbent pads are to be replaced as needed, but will always be replaced prior to the wet season. 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft/Vehicle/ Equipment Maintenance</p> <p>Aircraft/Vehicle/ Equipment Fueling</p> <p>Aircraft/Vehicle/ Equipment Washing</p> <p>Equipment Maintenance/ Degreasing</p> <p>Fuel/Chemical Storage</p> <p>Cargo Handling</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Oil and Grease</p> <p>Fuel</p> <p>Floatables</p> <p>Sediment</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Frequently inspect and clean separators</p> <p>Replace absorbent pads as needed</p>



LOS ANGELES WORLD AIRPORTS	
TC1	OIL/WATER SEPARATORS
<p style="text-align: center;"><i>Operational Considerations (continued):</i></p> <ul style="list-style-type: none"> ▪ The effluent valve will be closed during cleaning operations. ▪ Any standing water removed during the cleaning operation must be disposed of in accordance with federal, state, and local requirements. ▪ Any standing water removed during the cleaning operation must be replaced with clean water to prevent oil carry-over through the outlet. <p style="text-align: center;"><i>Contingency Response</i></p> <ul style="list-style-type: none"> ▪ Maintain adequate supplies of spill response equipment and materials in accessible location near areas where spills may be likely to occur. <p style="text-align: center;"><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ▪ Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education (see SC-10 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management. ▪ Perform and document in a log book all inspections and maintenance operations ▪ Develop a written operating, sampling and reporting procedure under local storm water authority guidelines. Train appropriate employees to implement these procedures. <p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ▪ Capital and O&M costs should be low. <p>LIMITATIONS:</p> <ul style="list-style-type: none"> ▪ Oil/water separator installations should be designed and installed by experienced individuals. Little data on the characteristics of petroleum hydrocarbons in storm water leads to considerable uncertainty about separator performance. <p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges</p>	



LOS ANGELES WORLD AIRPORTS	
SR1	EMERGENCY SPILL CLEANUP PLANS
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm water resulting from petroleum products or other materials</p> <p>GENERAL APPROACH:</p> <p>Owners and operators of facilities that store, process, or refine oil or oil products may be required by federal law (40 CFR 112) to develop and implement a Spill Prevention Control and Countermeasure (SPCC) plan. Emergency spill cleanup plans should include the following information:</p> <ul style="list-style-type: none"> ▪ A description of the facility including the owner’s name and address, the nature of the facility activity, and the general types and quantities of chemicals stored at the facility. ▪ A site plan showing the location of storage areas for chemicals, the location of storm drains, site drainage patterns, fire water source locations, and the location and description of any devices used to contain spills such as positive shut-off control valves. ▪ Notification procedures to be implemented in the event of a spill, such as key company personnel and local, state, and federal agencies. ▪ Instructions regarding cleanup procedures ▪ Designated personnel with overall spill response cleanup responsibility. <p>APPROACH TO EXISTING FACILITY ACTIVITIES:</p> <p>Operational Considerations</p> <ul style="list-style-type: none"> ▪ Post a summary of the plan at appropriate site locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill. ▪ Maintain an inventory of appropriate cleanup materials on-site and strategically deploy cleanup materials based on the type and quantities of chemicals present. ▪ Make absorbent readily available in the fueling areas <p>Contingency Response</p> <ul style="list-style-type: none"> ▪ Perform the following notifications in the event of a spill: <ul style="list-style-type: none"> ☐ Fire Department 	<p style="text-align: center;">TARGETED ACTIVITIES</p> <p>Aircraft/Vehicle/ Equipment Maintenance Aircraft/Vehicle/ Equipment fueling Aircraft/Vehicle/ Equipment Washing Cargo Handling Fuel/Chemical Storage Equipment Degreasing</p> <p style="text-align: center;">TARGETED POLLUTANTS</p> <p>Fuel Vehicle Fluids/Oils Solvent/Cleaning Solutions Pesticides/herbicides/ Fertilizers Battery Acid</p> <p style="text-align: center;">KEY APPROACHES</p> <p>Develop/implement SPCC, if required SPCC implementation training Immediate containment/cleanup of spills Availability of spill response equipment/materials Required Agency Notification</p>



LOS ANGELES WORLD AIRPORTS	
SR1	EMERGENCY SPILL CLEANUP PLANS
<p>Contingency Response (contd)</p> <ul style="list-style-type: none"> ☐ Local Health Department ☐ State Office of Emergency Services ☐ National Response Center – if spill exceeds reportable quantity (RQ) ■ Containment and cleanup of spills shall begin immediately 	
<p><i>Inspection and Training</i></p> <ul style="list-style-type: none"> ■ Provide formal training in plan execution to key personnel, with additional training for first responder level personnel (29 CFR 1910.120). All employees should have basic knowledge of spill control procedures. 	
<p>REQUIREMENTS:</p> <ul style="list-style-type: none"> ■ Capital and OEM costs should be small to moderate depending on the types and quantities of chemicals stored on-site. ■ Maintenance costs include periodic training and equipment replacement. 	
<p>LIMITATIONS:</p> <ul style="list-style-type: none"> ■ Spills occurring after work hours in confined areas may go undetected until they impact off-site areas. 	
<p>RELEVANT RULES AND REGULATIONS:</p> <p>Industrial Activities Storm Water General Permit, April 17, 1997 .40 CFR 110.3 Discharge of Oil .40 CFR 122 Oil Pollution Prevention (SPCC/OPA Plan) .40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance .40 CFR 122-124 NPDES Regulations for Storm Water Discharges</p>	