

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 1

AIRCRAFT DEICING/ANTI-ICING

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater and/or stormwater from aircraft deicing and anti-icing procedures. The level of biochemical oxygen demand (BOD) associated with the discharge of deicing/anti-icing compounds into receiving waters, such as Thurston and Bergen Basins and Jamaica Bay, can result in a decrease in the available oxygen which can impact aquatic life.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- Perform training for all personnel involved with deicing/anti-icing operations. The training should, at a minimum, include source reduction techniques, best management practices, good housekeeping and should educate tenants about the environmental impacts of use and over-spraying.
- Depending on weather conditions, apply only enough fluid to surfaces to ensure the safe operation of the aircraft. Excess fluid dripped to the ground enters directly into the storm drain.
- Depending on weather conditions use a range of propylene glycol/water blends (i.e., warmer temperatures, use a 30/70 glycol/water blend, colder temperatures/inclement weather use a 55/45 mix) to minimize the discharge of contaminants.
- In place of deicing/anti-icing at the gate use the new Radiant Deicing Facility (proximate to Terminal 1).
- Identify the number of flights affected by Irregular Operations Networks (IROPs) during giving inclement weather events to more effectively schedule aircraft departures to eliminate or greatly reduce the need for secondary application of deicing/anti-icing.
- Assess useful life of existing deicing/anti-icing trucks. Upgrade the trucks to include more efficient nozzles, heated deicing/anti-icing agent, blending capabilities, and air.
- Once approved by the FAA consider using alternative low environmental-impact deicing/anti-icing compounds now under development.
- Transfer deicing/anti-icing agents only in paved areas.
- The use of ethylene glycol and urea are strictly prohibited at JFK airport.
- Only materials approved by Port Authority may be used for runway and taxiway deicing/anti-icing.
- Record quantities of all deicing/anti-icing material used during deicing months to the Port Authority monthly.

TARGETED ACTIVITIES

- Aircraft deicing
- Aircraft anti-icing

TARGETED POLLUTANTS

- Propylene glycol
- Ethylene glycol (strictly prohibited)
- Urea (strictly prohibited)

KEY APPROACHES

- Apply only required amounts of fluid
- Educate personnel about the use of deicing agents.
- Use a range of glycol/water blends
- Use Radiant Deicing Facility.
- Upgrade existing truck fleet
- Implement forthcoming recommendations of FAA
- Report propylene glycol (ethylene glycol is strictly prohibited) releases to appropriate regulatory agencies

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 6 NYCRR Parts 370-374 New York State Hazardous Waste Regulations
- 6 NYCRR Part 360 Solid Waste Regulations
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for StormWater Discharges
- 40 CFR 302 Designation of Reportable Quantities and Notification Requirements for Hazardous Substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- 40 CFR 372 Toxic Chemical Release Reporting: Community Right-to-Know
- 40 CFR 401 Effluent Limitation Guidelines

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BMP 2

AIRCRAFT, VEHICLE AND EQUIPMENT FUELING

PURPOSE:

Prevent or reduce the discharge of pollutants to stormwater, groundwater, soil, and air from aircraft, vehicle, and equipment fueling.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

General

- Install shear valves or "breakaway" hose connections at all fuel dispensing stations and on all fuel dispensing equipment that will provide emergency shutdown of flow should the fueling connection be broken through movement.
- Periodically check hoses associated with fuel dispensing for leaks and tears.
- Automatic shut-off mechanisms should be in place on fuel tankers. These valves should remain in the closed position unless manually opened during fueling.
- Use absorbent materials and spot cleaning for small spills; do not hose down the area unless the storm drains in close proximity are blocked and drainage is collected by vacuum vehicle and disposed of through a permitted connection to an approved treatment facility.
- Avoid mobile fueling of equipment wherever feasible; fuel mobile equipment at designated fueling areas.
- Use drain blockers (e.g., pigs/mats) at catch basins or install gate valves at catch basins for use during fueling activity.
- Collect and properly dispose of any fuel spilled or leaked. Vacuum equipment/vehicles are recommended for collection.
- Always dispose of materials in an approved manner. Never discharge materials to a catch basin.
- Employ secondary containment or cover when transferring fuel from a tank truck to a vehicle or equipment fuel tank.
- Manage the disposal of water that collects in fuel tanks and fueling hydrant sumps according to state and federal regulations.
- Inspect, clean and maintain sumps and oil/water separators at appropriate intervals.

Motor Vehicle/ Equipment

- Ensure that motor vehicle fuel composition meets seasonal requirements for oxygen content and volatility.
- Operate appropriate vapor recovery equipment at gasoline dispensing sites.
- Install berms or curbing to divert stormwater runoff away from fueling area to avoid contact with contaminated surfaces.

TARGETED ACTIVITIES

- Aircraft fueling
- Motor vehicle fueling
- Equipment fueling

TARGETED POLLUTANTS

- Fuel Vapors
- Petroleum Hydrocarbons

KEY APPROACHES

- Install berms or curbing around fueling areas
- Use absorbent materials and/or vacuum equipment for spills
- Install proper equipment for fuel dispensing and tank monitoring to prevent spills, leaks and overflows
- Install vapor recovery systems at fuel dispensers and tanks
- Install canopies

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AIRCRAFT, VEHICLE AND EQUIPMENT FUELING

Operational Considerations (Continued.)

- 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.
- Test spill prevention/overfill protection equipment annually.
- Fuel pumps intended for vehicular use should be posted with signs stating "No Topping Off" to prevent overflow.

Aircraft

- Tanker trucks (aviation fueling vehicles) should be equipped with spill response kits.
- Periodically inspect valves on mobile aircraft fuelers and on aircraft wing tips.

Contingency Response

- Conduct proper spill reporting to the appropriate regulatory agencies.
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may likely occur. Furnish all maintenance vehicles with adequate supplies of spill response materials and appropriate spill response procedures.
- Develop and implement a Spill Prevention Control and Countermeasure Plan (SPCC), required in 40 CFR 112.3(a), (b).
- Train Employees in emergency procedures and evacuation methods.

Inspection and Testing

- Record all maintenance activities and inspections relating to fueling equipment and containers in a log book.
- Underground fuel storage tanks should be tested as required by federal and state laws.
- Provide the appropriate level of employee training in the following areas; spill response and prevention, stormwater pollution prevention education, right-to-know awareness training, and hazardous materials management.
- Develop regular maintenance and inspection programs for oil/water separators.
- Characterize wastes collected from oil/water separators. Dispose of these wastes properly and provide appropriate employee training.
- Inspect Stage II vapor recovery systems daily for integrity and efficiency.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Design fueling areas to prevent the run-on of stormwater and the runoff of spills by employing the following approaches (where authorized by the Port Authority):
 - 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.
 - Pave the fueling area with concrete rather than asphalt.
 - Where covering is infeasible and the fuel dispensing area has an asphalt pavement surface, consider applying a suitable sealant that protects the asphalt from spilled fuels.
- If a dead-end sump is not used to collect spills, install an appropriately sized oil/water separator.

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AIRCRAFT, VEHICLE AND EQUIPMENT FUELING

APPROACH TO SPILLS AT EXISTING FACILITIES

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, or other means.
- Minimize immediate fire and safety hazards.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall be required to complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
- Communicate spill events to others by using the radio network or series of alarms where appropriate.
- Remove and dispose contaminated soil/material.
- Remove and recover free product in surface or groundwaters.
- Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.
- Install Stage I and Stage II vapor recovery systems on gasoline dispensing equipment.
- Install shear valves on all fuel dispensing equipment.
- Design facilities to include secondary containment where required and/or appropriate.
- Upgrade or replace existing fuel storage tanks to have leak detection, spill containment, and overfill prevention.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR 608, 611 Oil Spill Prevention and Compensation Act
- 6 NYCRR 595-597 Chemical Bulk Storage
- 6 NYCRR Part 360 Solid Waste Regulations
- 6 NYCRR 360-14 Waste Oil Regulations
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage
- 6 NYCRR Part 371 Hazardous Waste Regulations
- 29 CFR 1910 (Subparts G, H, I, J, and K,) Hazardous Materials, Environmental Controls, and Personnel Protection.
- 29 CFR 1910.1200 OSHA Hazard Communication Standard
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 260-262, 268, and 270-272 Hazardous Waste Management
- 40 CFR 264-265 Preparedness, Prevention and Contingency Plan (PPCP)
- 40 CFR 302 Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under CERCLA
- 40 CFR 372 Toxic Chemical Release Reporting: Community Right-to-Know
- 40 CFR 413, 433, and 469 NPDES Toxic Organic Management Plan (NPDESTOMP)
- 40 CFR 761 Toxic Substances
- 40 CFR 33 Oil Pollution Act of 1990
- 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 401 Effluent Limitation Guidelines

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BMP 3

AIRCRAFT, VEHICLE AND EQUIPMENT MAINTENANCE

PURPOSE:

Prevent or reduce the discharge of pollutants to surface water, groundwater, Publicly Owned Treatment Works (POTW), soil and air from aircraft, vehicle, and equipment maintenance and repair, including ground vehicle and floor washdowns.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

Minimum maintenance activities, including preflight checks and emergency repairs, shall employ the following to the extent practicable. All other maintenance shall be performed indoors or at designated airport facilities.

Good Housekeeping

- Use drip pans.
- Use absorbent materials at potential problem areas. 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 or sanitary 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 that third party cleaning contractors are informed of BMPs and appropriate disposal practices.
- Drain and properly dispose of all fluids and remove batteries from salvage aircraft, vehicles, and equipment
- Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, solvents or other cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters.
- Use biodegradable products and substitute materials with less hazardous properties where feasible.
- Tenants are required to use drip pans when performing maintenance such as adding oil or changing oil at the ramps.

TARGETED ACTIVITIES

- Aircraft Maintenance
- Ground Vehicle Maintenance
- Equipment Maintenance
- Ground Transportation

TARGETED POLLUTANTS

- Oils & greases
- Petroleum hydrocarbons
- Propylene glycol
- Halogenated solvents
- Non-halogenated solvents

KEY APPROACHES

- Perform maintenance indoors, if possible
- Cap floor drains in areas where maintenance occurs
- Consider off-site maintenance by contractors
- Initiate employee spill prevention and response training

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AIRCRAFT, VEHICLE AND EQUIPMENT MAINTENANCE

Maintenance

- 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.
- Activities such as painting and stripping, battery charging, and welding may require air permitting; check with local and state agencies for applicability.

Operational Considerations (continued)

Physical Site Usage

- Conduct maintenance activities indoors or at designated airport locations.
- Use designated washing, steam cleaning, and degreasing areas to clean equipment.
- Store mechanical parts and equipment that may yield even small amounts of contaminants (i.e., oil or grease) under cover and away from drains.

Structural Control

- Maintenance and cleaning areas should be equipped with runoff controls that prevent discharge to storm and sanitary sewers.

Inspection and Testing

- Provide the appropriate level of employee training in the following areas: spill response and prevention, stormwater pollution prevention education, right-to-know awareness training, and hazardous materials management.
- Provide employee stormwater quality awareness training.
- Develop regular maintenance and inspection programs for oil/water separators.
- Characterize wastes collected from oil/water separators. Dispose of these wastes properly and provide appropriate employee training.
- Additional training procedures and requirements are identified in BMP 15: Stormwater Pollution Prevention Education.

Contingency Response

- Maintain adequate supplies of spill response equipment and materials (i.e. Speedy Dry, spill mats) 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.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Provide indoor maintenance areas when implementing BMPs at existing facilities and future upgrades to other facilities.
- Do not install floor drains in areas where maintenance is to be performed.

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BMP 3 AIRCRAFT, VEHICLE AND EQUIPMENT MAINTENANCE

APPROACH TO SPILLS AT EXISTING FACILITIES

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, drain covers, or other appropriate means.
- Minimize immediate fire and safety hazards.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
- Communicate spill events to others by using the radio network or series of alarms where appropriate.

APPROACH TO SPILLS AT EXISTING FACILITIES (Continued)

- Remove and dispose contaminated soil/material.
- Remove and recover free product in surface or groundwater.
- Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR 608, 611 Oil Spill Prevention and Compensation Act
- 6 NYCRR 595-597 Chemical Bulk Storage Regulations
- 6 NYCRR Part 360 Solid Waste Regulations
- 6 NYCRR 360-14 Waste Oil Regulations
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations
- 6 NYCRR Part 371 Hazardous Waste Regulations
- 29 CFR 1910 (Subparts G, H, I, J, and K,) Hazardous Materials, Environmental Controls, and Personnel Protection.
- 29 CFR 1910.1200 OSHA Hazard Communication Standard
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 260-262, 268, and 270-272 Hazardous Waste Management
- 40 CFR 264-265 Preparedness, Prevention and Contingency Plan (PPCP)
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- 40 CFR 372 Toxic Chemical Release Reporting: Community Right-to-Know
- 40 CFR 413, 433, and 469 NPDES Toxic Organic Management Plan (NPDESTOMP)
- 40 CFR 761 Toxic Substances
- 40 CFR 33 Oil Pollution Act of 1990
- 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
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BMP 4

**AIRCRAFT, VEHICLE AND EQUIPMENT WASHING, STEAM
CLEANING AND DEGREASING**

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater, and stormwater drains from aircraft, vehicle, and equipment washing, and equipment degreasing.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Note: Aircraft, vehicle, and equipment washing, steam cleaning, and degreasing are prohibited at JFK with the following exceptions:

- Vehicles, aircraft, and equipment are washed indoors only and any wastewater generated is discharged to the sanitary sewer.
- Washing is discouraged at JFK's outdoor areas not connected to sanitary sewers.
- Vehicles washed at the designated Allied Building Lot outdoor area, requires that storm drains are covered prior to the commencement of the washing cycle. All wastewater must be captured and taken off site for disposal. No vehicle wash water from the designated outdoor area is allowed to enter either the sanitary sewer or the storm drains.
- For cleaning activities allowed at JFK, refer to the following operational, contingency and training approaches.

Operational Considerations

Implement the following to the maximum extent practical.

Good Housekeeping

- Use "dry" washing and surface preparation techniques where feasible. Several products are available 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 biodegradable phosphate-free detergents.
- Keep washing area clean and free of waste.
- Include proper signage indicating that the discharge of waste oils into the drains is strictly prohibited.
- Discharge wash water to an approved treatment facility (sanitary sewer system) through a permitted connection.
- Ensure that wash water discharged to the sanitary sewer meets the pretreatment standards of the local POTW which treats the water.

Physical Site Usage

- Consider off-site commercial washing and steam cleaning where feasible. Using appropriate off-site facilities that will decrease the waste generated on-site.

TARGETED ACTIVITIES

- Aircraft washing
- Vehicle washing
- Equipment washing
- Equipment degreasing

**TARGETED
POLLUTANTS**

- Oil and grease
- Solvents
- Vehicle fluids
- Cleaning solutions

KEY APPROACHES

- Use designated areas
- Use dry washing techniques
- Recycle wash water or discharge appropriately
- Reclaim/Recover wash water
- Cover catch basins
- Provide training

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BMP 4

AIRCRAFT, VEHICLE AND EQUIPMENT WASHING

Physical Site Usage (Continued)

- Do not contract with auto dealers or other cleaning companies that use wet operations discharging to the storm drain system or receiving waters.
- Always use facility-designated indoor wash areas, or the JFK designated outdoor wash area, to prevent contamination of stormwater by contact with wastes.

Maintenance

- Inspect, clean, and maintain oil/water separators that are connected to indoor floor drains and receive discharges of washwater.

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, stormwater pollution prevention education, 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.
- Additional training procedures and requirements are identified in BMP 15: Stormwater Pollution Prevention Education.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Consider off-site commercial washing where feasible. Using appropriate off-site facilities that will decrease the waste generated on-site.

APPROACH TO SPILLS AT EXISTING FACILITIES

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, or other means.
 - Minimize immediate fire and safety hazards.
 - Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
 - Tenants and contractors shall complete a PANYNJ Spill Report Form and submit it to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
 - Communicate spill events to others by using the radio network or series of alarms where appropriate.
 - Remove and dispose contaminated soil/material.
 - Remove and recover free product in surface waters or groundwaters.
 - Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.

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BMP 4

AIRCRAFT, VEHICLE AND EQUIPMENT WASHING

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Part 360 Solid Waste Regulations
- 6 NYCRR Parts 370-373 Hazardous Waste Regulations
- New York State Environmental Conservation Law
- 40 CFR 112 Oil Pollution Prevention for Spill Prevention Control and Countermeasure (SPCC) Plan
- 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 Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines

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BMP 5

BUILDING CLEANING AND MAINTENANCE

PURPOSE:

Comply with state and federal regulations regarding safe work practices for equipment which may be used in building cleaning and maintenance. Prevent or reduce the discharge of pollutants to soil, surface water (via storm sewer and the local Publicly Owned Treatment Works (POTW) and groundwater. Sources of pollutant discharges include equipment blowdown, waste handling and disposal, and other discharges. Prevent air emissions from building maintenance, cleaning and HVAC operations.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

Pesticides

- Develop integrated pest management programs where appropriate.
- Minimize use of pesticides and fertilizers. Use pesticides and fertilizers according to directions. Seek less harmful/toxic pesticides and fertilizers to replace ones currently used.
- Use only certified pesticide applicators. All Port Authority Maintenance personnel using pesticides and fertilizers have successfully completed training and are certified by the NYSDEC.
- Have pesticide product information available at facility; make information available to tenants and employees.
- Maintain a schedule for pesticide application and a record of pesticide usage.
- When performing self-application,
 - make sure employees are certified pesticide applicators
 - have effective backflow prevention devices for application equipment
 - provide proper personnel protection equipment to persons handling, loading, mixing, and applying pesticides
 - store pesticides in their original containers with legible labels.
 - send annual report to NYSDEC detailing pesticide application.

Stationary Combustion Installations

- Perform annual boiler inspections and tune-ups.
- Operate boilers and other stationary combustion installations within their permissible limits and maintain a log of boiler operation and maintenance.
- If possible, do not allow discharges of boiler blowdown to the sanitary sewer and never discharge blowdown to the storm sewer system. Properly dispose blowdown with other oily wastewaters.
- Check that fuel composition meets NYSDEC requirements for sulfur.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Part 368 Recycling Emblems
- 6 NYCRR Parts 325 and 326 Pesticide Storage, Handling, and Disposal
- NYS Environmental Conservation Law, Article 33

TARGETED ACTIVITIES

- Maintenance of stationary combustion installations (boilers)
- Equipment blowdown
- Pesticide application
- Liquid waste storage
- Solid waste disposal
- Hazardous waste storage
- Painting/stripping
- Floor washdowns
- Transformer inspection
- Use of man lifts, platforms, etc.
- Hazardous Waste Storage

TARGETED POLLUTANTS

- Oils & greases
- Petroleum hydrocarbons
- Propylene glycol
- Halogenated solvents
- Non-halogenated solvents

KEY APPROACHES

- Perform maintenance indoors, if possible
- Cap floor drains in areas where maintenance occurs
- Consider off-site maintenance by contractors
- Initiate employee spill prevention and response training

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BUILDING CLEANING AND MAINTENANCE

RELEVANT RULES AND REGULATIONS (Continued):

- 6 NYCRR Parts 370-374 New York State Hazardous Waste Management Regulations
- 6 NYCRR Part 360 New York State Solid Waste Disposal Regulations
- 6 NYCRR Part 376 New York State Land Disposal Restrictions
- 29 CFR 1910 Subpart N-Material Handling and Storage
- 29 CFR 1910.1200 OSHA Hazard Communication Standard
- 40 CFR 112 Oil Pollution Prevention for Spill Prevention and Control and Countermeasure (SPCC) Plans
- 40 CFR 122 National Pollutant Discharge Elimination System (NPDES) Regulation
- 40 CFR 260-262, 268, and 270-272 Hazardous Waste Management
- 40 CFR 302 Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- 40 CFR 372 Toxic Chemical Release Reporting: Community Right to Know
- 40 CFR 761 Toxic Substances
- 40 171–173, 175 and 177 Department of Transportation Regulations
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharge
- 40 CFR 401 Effluent Limitation Guidelines

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BMP 6

CHEMICAL AND PETROLEUM STORAGE AND HANDLING

PURPOSE:

Ensure compliance with state and federal regulations regarding registration, handling, and storage of chemicals. Prevent or reduce discharge of pollutants to storm sewer, Publicly Owned Treatment Works (POTW), or air by minimizing storage of materials on site, storing materials in designated areas, installing secondary containment and conducting regular inspections of storage areas. Storage of chemicals and petroleum products can pose the following risks: stormwater pollution, injury to workers or visitors, groundwater pollution, soil contamination, air pollution.

APPROACH TO STORAGE AT EXISTING FACILITIES:

Operational Considerations

Monitoring

- Perform inventory monitoring of all chemicals delivered to and stored on site; report inventories on annual basis, whenever required by state or local agencies.
- Maintain inventories in as small a quantity as practical.
- Perform weekly inspection of tanks and containers for leaks.
- Perform annual testing of all valves, hoses, and other miscellaneous equipment.
- Perform monthly inspection of release/leak detection system.
- Prepare monthly inspection report to address compliance related requirements.

Storage

- Designate areas for chemical storage of containers (may not be possible for tanks).
- Store all chemical and petroleum products in a covered area.
- Store containers within secondary containment, such as within berms or dikes.
- Keep all chemicals in original containers.
- Keep all containers closed when not in use to prevent spills and air emissions.
- Maintain legible labels on all containers and tanks. Label all fillports of petroleum tanks with symbols and colors that are consistent with the American Petroleum Institute Standards.
- Comply with fire codes for storage of ignitable, flammable, or reactive liquids.
- To the extent practical, minimize storage and handling.

Training

- Train employees in storage procedures.
- Train employees in spill prevention and clean-up procedures.

TARGETED ACTIVITIES

- Underground Storage
- Aboveground Storage
- Material Handling

TARGETED POLLUTANTS

- Oils & greases
- Petroleum hydrocarbons
- Lubricants
- Paints
- Battery Acid
- Solvents

KEY APPROACHES

- Perform routine inspections and maintenance
- Initiate employee spill prevention and response training

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CHEMICAL AND PETROLEUM STORAGE AND HANDLING

Compliance

- Comply with all applicable state and federal regulations applying to tanks including requirements for:
 - registration of aboveground storage tanks (ASTs) and underground storage tanks (USTs)
 - inspection of storage tanks
 - preparation of Spill Prevention Report for facilities with chemical storage tanks
 - preparation of Spill Prevention Control and Countermeasure Plan for aboveground petroleum storage greater than 600 gallons in one container or 1320 gallons total, or for facilities with more than 40,000 gallons of underground storage
 - labeling
 - inventory monitoring and associated record keeping
 - UST tightness testing, AST inspections and associated record keeping
 - tank closure
 - Major On-Shore Storage Facilities (>400,000 gallons on-site petroleum storage) must maintain sufficient records to substantiate average daily throughput and quantity of monthly fuel transfers
 - pay monthly license fee
 - When taking tanks temporarily out-of-service, follow state and federal standards for temporary closure.
 - When placing tanks permanently out-of-service, follow state and federal standards for permanent closure; report change in service to NYSDEC.

APPROACH TO SPILLS AT EXISTING FACILITIES:

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, or other means.
- Minimize immediate fire and safety hazards.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
- Communicate spill events to others by using the radio network or series of alarms where appropriate.
- Remove and dispose of contaminated soil/material.
- Remove and recover free product in surface or ground waters.
- Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.

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).
- Develop and implement a Spill Prevention Report (SPR), if required under the guidelines set forth in 6 NYCRR Parts 595-599.
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spill may be likely to occur.

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 6

CHEMICAL AND PETROLEUM STORAGE AND HANDLING

APPROACH TO SPILLS AT EXISTING FACILITIES (cont.):

Inspection and Training

- Inspect containers frequently for leaks and proper closure seal.
- Develop employee training programs which emphasize the proper storage and handling procedures for chemical and petroleum products.
- Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Existing underground chemical and petroleum storage tanks should be upgraded with leak detection, spill containment, and overfill protection before December 22, 1998, the federal regulatory deadline.
- Incorporate adequate chemical and petroleum storage facilities into future buildings.
- Design facilities which have sheltered (covered) material storage areas.
- Construct secondary containment in proposed aboveground chemical and petroleum storage areas.
- Do not construct floor drains in areas where chemicals will be stored.
- When determining the size the layout of the chemical storage room, consider fire codes for reactive, flammable, and ignitable materials.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 6 NYCRR Parts 610, 612-614 Petroleum Bulk Storage Regulations
- 6 NYCRR Parts 608, 611 Oil Spill Prevention and Compensation Act
- New York State Environmental Conservation Law Articles 37 & 40
- New York State Uniform Fire Prevention and Building Code
- 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 Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines
- 40 CFR 302 Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
- 40 CFR 280-281 Underground Storage Tanks
- 40 CFR 372 Chemical Release Reporting: Community Right-to-Know
- 29 CFR 1910.1200 OSHA Hazard Communication Standard
- 49 CFR 171-173, 175 and 177 Department of Transportation Regulations

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 7

**ELIMINATION OF NON-STORM WATER
DISCHARGES TO STORM DRAINS**

PURPOSE:

Existing discharges: Eliminate non-stormwater discharges to the stormwater collection system. Non-stormwater discharges can be classified as follows: washwater, deicing fluids, and spillage, process wastewater, treated cooling water, and sanitary wastewater (through a pipe).

Prevention of illicit connections: Physical connections to the storm drain system from sanitary sewers, floor drains, industrial process discharge lines, and wash racks that are not expressly permitted by local, New York State and Federal governing agencies.

APPROACH TO EXISTING FACILITY ACTIVITIES:

General

The following techniques may be used to identify activity-based non-stormwater discharges to the stormwater collection system:

- Perform frequent activity inspections to identify non-stormwater 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.

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.
- Mark storm drains for easy identification and prevention of illicit discharges

Required Plan and/or Permits

- 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. In addition, owners or operators of a hazardous bulk storage facility (defined by NYSDEC Chemical Bulk Storage Regulations) are required to prepare and maintain a Spill Prevention Report (SPR). See BMP-8, "Spills Management," for additional information.

TARGETED ACTIVITIES

- All maintenance
- All fueling
- All washing
- Equipment blowdown
- Cargo handling
- All storage
- Painting/stripping
- Aircraft deicing/anti-icing
- Aircraft lavatory service
- Fire fighting equipment testing
- Potable water system flush
- Equipment leaks
- Runway rubber removal

TARGETED POLLUTANTS

- Oil and grease
- Vehicle fluids
- Fuel
- Solvents/cleaning solution
- Deicing/anti-icing fluid
- Battery acid
- Pesticides/herbicides/
- Fertilizers
- Paint
- Aircraft fire fighting foam
- Metals
- Dumpster wastes
- Landscape waste
- Lavatory chemical wastes
- Potable water system chemicals

KEY APPROACHES

- Perform inspections and enforcement
- Provide training for employees
- Promote education of vendor/public

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 7

**ELIMINATION OF NON-STORM WATER
DISCHARGES TO STORM DRAINS**

Required Plan and/or Permits (Continued)

Discharges of stormwater and groundwater associated with construction activities (if one acre or more is impacted by construction) to waters of the state require coverage under a State Pollutant Discharge Elimination System (SPDES) Permit from the NYSDEC. The Port Authority holds an individual industrial SPDES permit for JFK International Airport and its outfalls NY 000 8109.

Tenant Construction - Stormwater Construction Requirements

Tenants who engage in construction activities involving soil disturbances of one (1) or more acres, except when the construction activity is in a combined sewer drainage area, must follow the SPDES Permit "Special Conditions - Best Management Practices", Item 4, Part B, "Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters", which requires that a Notice of Intent (NOI) and SWPPP be prepared and submitted to the NYSDEC. The tenant performing the disturbance will submit the NOI and SWPPP to the Port Authority for review and approval as part of the Tenant Alteration Agreement (TAA) process prior to submittal to the NYSDEC by the Port Authority. After submittal, a pre-construction meeting will be held with the NYSDEC, Port Authority, tenant and contractor.

The tenant will be responsible for ensuring the provisions of the SWPPP are properly implemented. Submission of the NOI is required for informational purposes; projects at the airport are not eligible for and will not obtain coverage under any general permit for stormwater discharges.

Port Authority Construction - Stormwater Construction Requirements

Port Authority construction activities involving soil disturbances of one (1) or more acres, except when the construction activity is in a combined sewer drainage area, must follow the SPDES Permit "Special Conditions - Best Management Practices", Item 4, Part B, "Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters", which requires that a Notice of Intent (NOI) and SWPPP be prepared and submitted to the NYSDEC.

The Port Authority will be responsible for ensuring the provisions of the SWPPP are properly implemented. Submission of the NOI is required for informational purposes; projects at the airport are not eligible for and will not obtain coverage under any general permit for stormwater discharges.

Contingency Response

- Follow spill notification and reporting procedures as described in BMP-8, "Spills Management." Follow contingency plans for spill containment as described in facility's SPCC or SPR, if applicable.
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spill may be likely to occur.

Inspection and Training

- Inspect waste containers frequently for leaks and proper closure seals. Keep dumpsters covered and plug any holes to prevent leaks from waste materials or run-through of liquid wastes and/or rainwater.
- Develop employee training programs which emphasize the proper storage and disposal procedures for operations-derived wastes, particularly waste waters. (See BMP 13, "Waste Management")
- Provide the appropriate level of employee training in the following areas: spill response and prevention, stormwater pollution prevention education, right-to-know awareness training, and hazardous materials management.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Provide marking on storm drains for easy identification and prevention of illicit discharges.
- 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 drawings for all projects. Keep a set of the drawings 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 painting, mechanical maintenance, chemical/fuel storage and delivery, material handling, waste handling and storage, lavatory service, and food preparation.

APPROACH TO SPILLS AT EXISTING FACILITIES:

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, or other means.
- Minimize immediate fire and safety hazards.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
- Communicate spill events to others by using the radio network or series of alarms where appropriate.
- Remove and dispose contaminated soil/material.
- Remove and recover free product in surface or ground waters.
- Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- New York State Environmental Conservation Law, Title 8, Article 17
- 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 Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 8

SPILLS MANAGEMENT

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater, stormwater, surface water or air resulting from spills. Develop spill prevention plans to contain accidental and continuous releases of petroleum products or hazardous substances. Identify proper reporting procedures to implement in the event of a spill.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- 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 absorbents readily available in fueling areas.
- A spill clean-up contractor should be under contract with the tenant and available immediately during emergency situations.

Required Plans

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. In addition, owners or operators of a hazardous bulk storage facility (defined by NYSDEC Chemical Bulk Storage Regulations) are required to prepare and maintain a Spill Prevention Report (SPR). SPCC and SPR plans should include the following information:

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.

Spill prevention plans should be periodically updated as physical changes are made to the facility (e.g. layout, number of tanks, types of processes).

TARGETED ACTIVITIES

- Aircraft/vehicle/equipment maintenance
- Aircraft/vehicle/equipment fueling
- Aircraft/vehicle/equipment washing
- Cargo handling
- Fuel/chemical handling & storage
- Equipment degreasing

TARGETED POLLUTANTS

- Fuel
- Vehicle fluids/oils
- Solvents/cleaning solutions
- Pesticides/herbicide s/fertilizers
- Battery acid
- Propylene glycol

KEY APPROACHES

- Develop/implement SPCC, if required
- SPCC implementation training
- Immediate containment/cleanup of spills
- Availability of spill response equipment/materials
- Required agency notification

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 8

SPILLS MANAGEMENT

Notification Requirements

- Notify all applicable local, state and federal agencies in the event of a spill, including the following:
 - NYC Fire Department :1-212-628-2900 (PA Police will contact)
 - NYSDEC Spills Hotline : 1-800-457-7362
 - National Response Center - if discharges of hazardous substances exceeds the reportable quantity (RQ): 1-800-424-8802
 - NYCDEP Spill Hotline: 1-718-595-4646
 - NYCDEP: 311 and 1-718-529-3549
 - US Coast Guard - if spill is near or has potential to enter navigable waters of the US including surface waters and adjoining shorelines: 1-718-354-4120
 - PA Central Police Desk: 1-718-244-4333
 - PA Operations: 1-718-244-3800
 - PA Environmental: 1-718-244-3568

Note: reporting to the PA does not preclude the requirement to contact other agencies.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.

Contingency Response

- Implement spill containment and cleanup procedures immediately, as described in SPCC Plan and/or SPR.
- Maintain contract with spill clean-up contractor for immediate mobilization during emergency situations.
- Contact clean-up contractors as identified in spill prevention plans.
- Perform follow-up reporting procedures as required by regulatory agencies or as identified in the facility's SPCC Plan and/or SPR.
- For continuous releases (e.g., propylene glycol), provide required telephone and written notifications to appropriate state and local agencies.
- Properly dispose any materials that have been contaminated as a result of a spill.

Inspection and Training

- Provide appropriate training for key personnel, with additional training for first responder level personnel (29 CFR 1910.120). All employees should have basic knowledge of spill control procedures.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Design bulk storage facilities which utilize effective spill prevention and containment technology.
- Locate bulk storage facilities in areas which minimize potential discharge to soil, groundwater, surface water, storm water or sanitary systems.

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 8

SPILLS MANAGEMENT

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 40 CFR 110.3 Discharge of Oil
- 40 CFR 112 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
- Article 12, New York State Navigation Law
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 6 NYCRR Parts 608, 611 Oil Spill Prevention and Compensation Act
- 40 CFR 372 Toxic Chemical Release Reporting: Community Rights to Know
- 40 CFR 302 Resignation, Reportable Quantities and Notification Requirements for Hazardous Substance
- Under CERCLA

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 9

LAVATORY SERVICE OPERATIONS

PURPOSE:

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-stormwater discharges and residuals associated with servicing these facilities can be classified as follows:

- 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.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- 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 stormwater 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.
- 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/back flushing 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.
- Personnel are instructed to position a “Waste Catch Bucket” under the lavatory service panel.

TARGETED ACTIVITIES

- Aircraft Lavatory Service
- Lavatory Truck Cleanout

TARGETED POLLUTANTS

- Lavatory Chemicals
- Lavatory Waste
- Lavatory Truck Wash Water

KEY APPROACHES

- Do not discharge lavatory waste to sanitary sewer connections other than triturator facilities
- Utilize buckets or pans to capture drippage from aircraft lavatory access fittings
- Do not perform lavatory truck cleanout at any location other than triturator facilities
- Carry absorbent and other containment equipment on the lavatory service equipment

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 9

LAVATORY SERVICE OPERATIONS

Contingency Response

- 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.

Inspection and Training

- 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, right-to-know awareness training, and hazardous materials management.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- 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 sewerage agencies.
- Triturator facilities should not be located near storm drains.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 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

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 10

OIL/WATER SEPARATORS

PURPOSE:

Oil/water separators are baffled chambers designed to remove petroleum compounds and greases from storm water. Oil/water separators also remove floatable debris and settled solids (sediment).

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- Separators must be inspected and cleaned frequently of accumulated oil, grease, floating debris and sediments to be effective storm water quality controls.
- Oil absorbent pads are to be replaced as needed but should always be replaced prior to the wet season.
- The effluent shutoff valve should 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.

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, 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.

TARGETED ACTIVITIES

- Aircraft/vehicle/equipment maintenance
- Aircraft/vehicle/equipment fueling
- Aircraft/vehicle/equipment washing
- Equipment maintenance/Degreasing
- Fuel/chemical storage
- Cargo handling

TARGETED POLLUTANTS

- Oil and grease
- Fuel
- Floatables
- Sediment

KEY APPROACHES

- Frequently inspect and clean separators
- Replace absorbent pads as needed

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 10

OIL/WATER SEPARATORS

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

Design of New Facilities and Existing Facility Upgrades:

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:

- 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.

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.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 608, 611 Oil Spill Prevention on Compensation Act
- 6 NYCRR Part 360-14 Waste Oil Regulations
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations
- 40 CFR 40 Effluent Limitation Guidelines
- 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 Stormwater Discharges

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 11

OUTDOOR HANDLING OF MATERIAL

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater, surface water or stormwater from loading and unloading of material and cargo.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

Good Housekeeping

- 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 GEPs. Require contractor/hauler adherence to GEP 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.

Physical Site Usage

- Protect all loading/unloading activities from rainfall, run-on and wind dispersal to the maximum extent practical. 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.

Structural Controls

- Cover loading/unloading areas/docks to reduce exposure of materials to rain. Construct roofing structure over material handling area, or move indoors.

Maintenance

- Conduct berm repair and patching.
- Inspect, clean and maintain oil/water separators.

Contingency Response

- 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.

TARGETED ACTIVITIES

- Cargo handling
- Fuel storage
- Chemical storage
- Equipment storage

TARGETED POLLUTANTS

- Fuel
- Pesticides/ herbicides/ fertilizers
- Oil and grease
- Solvents/cleaning solutions
- Battery acid

KEY APPROACHES

- Conduct loading/unloading under cover
- Transfer materials in paved areas, away from storm drain inlets
- Contain and absorb leaks/spills that occur during material transfer

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 11

OUTDOOR HANDLING OF MATERIAL

Inspection and Training

- Conduct regular inspections and make repairs as necessary. Document inspections.
- Check loading/unloading equipment (valves, pumps, flanges, and connections) regularly for leaks. Document inspections.
- Develop and implement a written operations plan which describes loading/unloading procedures.
- Provide proper training for material handling equipment operators. Include periodic refresher training.
- Provide the appropriate level of employee training in the following areas: spill response and prevention, stormwater pollution prevention education, right-to-know awareness training, and hazardous materials management. Include periodic refresher training.

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- Design loading/unloading areas to prevent stormwater run-on through the use of the following practices:
 - Grading or berming.
 - Positioning roof downspout to direct stormwater away from loading/ unloading areas.
- Design facilities so that materials which may contribute pollutants to stormwater may be stored indoors or under cover.
- Incorporate oil/water separators into exposed loading dock designs.

APPROACH TO SPILLS AT EXISTING FACILITIES:

- Prevent spills from entering storm drains, floor drains, other receiving waters, and soil, through use of absorbent pigs, booms, or other means.
- Minimize immediate fire and safety hazards. If appropriate, sound alarms.
- Tenants and contractors shall report any discharge of petroleum greater than 5 gallons to NYSDEC within 2 hours of discovery, and notify NYSDEC and/or the National Response Center for releases of a reportable quantity of a hazardous substance. Tenants and contractors are required to notify PANYNJ Police of any spill events; spills should be reported to the Manager, Environmental Services and PANYNJ Police.
- Tenants and contractors shall complete a PANYNJ Spill Report Form and submit to the PANYNJ within one business day identifying the event date/time, location, type of spill, response, gallons spilled, cause/reason for spill leak, and recommended remedial action.
- Remove and dispose contaminated soil/ material.
- Communicate spill events to others by using the radio network or series of alarms where appropriate.
- Remove and recover free product in surface or ground waters.
- Repair or replace leaking equipment.
- Perform other actions which regulatory agencies may require.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 6085611 Oil Spill Prevention and Compensation Act
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations

- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 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 Stormwater Discharges

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 12

OUTDOOR MATERIAL AND EQUIPMENT STORAGE

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater, surface water, or stormwater from outdoor storage areas for significant material (e.g., fuels, chemicals, bagged material on pallets, soils or asphalt material bulk storage, deicing compounds, and equipment etc.).

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

Good Housekeeping

- Avoid dispensing from drums positioned horizontally in cradles. Dispense materials from upright drums equipped with hand pumps if possible. 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 stormwater.
- 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.
- Properly label all chemical containers with information, including their contents, hazards, spill response and First-aid procedures, manufacturer's name and address, and storage requirements. See local and New York State requirements for labeling. Maintain copies of MSDS on file for any materials stored and/or handled by the applicator.

Physical Site Usage

- Protect all significant materials from rainfall, run-on, runoff and wind dispersal to the maximum extent practical. Viable options are:
 - Store material indoors.
 - Cover the storage area with a roof.
 - Cover the material with a temporary covering made of polyethylene, polypropylene, or hypalon.
- Minimize stormwater run-on by enclosing the area, building a berm around the area, store indoors, or completely cover.

TARGETED ACTIVITIES

- Aircraft/vehicle/equipment maintenance
- Aircraft/vehicle fueling
- Fuel/chemical/equipment storage
- Cargo handling
- Soil stockpiling

TARGETED POLLUTANTS

- Fuel
- Solvents/cleaning solutions
- Deicing/anti-icing fluids

KEY APPROACHES

- Store materials indoors or under cover
- Store drums/containers on pallets
- Provide berming or secondary containment
- Develop/implement an SPCC, if required
- Perform and document periodic inspections

Physical Site Usage (Continued)

- Reduce the quantities of significant materials stored outside (i.e., chemicals) to the minimum volume required based on variables such as release potential, usage, and shelf life.
- Make use of existing overhangs to the extent practicable.

Structural Controls

- Provide berming or secondarily contain storage tankers, ASTs, drums and containers.
- Install, maintain, and replace catch basin filter inserts consistent with manufacturers specifications.

Maintenance

- Inspect, clean and maintain sumps, on a regular basis.
- Periodically inspect all equipment stored outdoors, including trash compactors, vehicles, etc. If leaks are noted, repair immediately. If repairs are not possible, confine and contain the leak, ensuring that it does not enter any storm drains until clean up or reports can be completed.

Contingency Response

- Develop and implement a Spill Prevention Control and Countermeasures (SPCC) Plan, if required under guidelines set forth in 40 CFR, Section 112.3(a), and (b), submit to NYSDEC for approach.
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.
- Post appropriate signs at all chemical storage locations in clearly visible locations noting the materials stored, emergency contacts, and spill cleanup procedures.

Inspection and Training

- Perform and document periodic inspections in a logbook. Inspection items should include the following:
 - External corrosion and structural failure.
 - Spills and overfills due to operator failure.
 - Failure of piping system (pipes, pumps, flanges, couplings, hoses, and valves).
 - Leaks or spills during pumping of liquids or gases.
 - Loose fittings, poor welds, and improper or poorly fitted gaskets.
 - Tank foundations and storage area coatings.
- Provide the appropriate level of employee training in spill response and prevention, stormwater pollution prevention, right-to-know awareness, and hazardous material management.

RELEVANT RULES AND REGULATIONS

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 40 CFR 110.3 Discharge of Oil

RELEVANT RULES AND REGULATIONS (Continued)

- 40 CFR 112 Oil Pollution Prevention (SPCC/OPA Plans)
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance

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BMP 12

OUTDOOR MATERIAL AND EQUIPMENT STORAGE

- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 6 NYCRR Parts 612-614 Petroleum Bulk Storage Regulations
- 6 NYCRR Part 360 Solid Waste Disposal Regulations
- 6 NYCRR Parts 370-374 New York State Hazardous Waste Management Regulations

Port Authority of New York and New Jersey
John F. Kennedy International Airport

BMP 13

WASTE MANAGEMENT

PURPOSE:

Minimize waste production and increase awareness in waste management options. Prevent or reduce discharge of pollutants to soil, groundwater, surface water and stormwater. Comply with state and federal regulations pertaining to the generation and disposal of solid and hazardous waste.

APPROACH TO EXISTING FACILITY ACTIVITIES:

General

In general, the following is an appropriate hierarchy for waste generation and disposal:

REDUCE•REUSE•RECYCLE•DISPOSE

Reduce: Evaluate areas where operations can be altered to minimize the production of waste. Examples: a) Amount of wastewater generated during vehicle washing can be minimized by installation of a washwater recovery and recycling system; b) At times, the amount of packaging can be minimized.

Reuse: Some materials can be reused several times before disposal. Examples: a) Packing material can often be reused; b) Installation of a solvent recovery system will allow solvent to be used several times before being spent.

Recycle: Identify operations that generate cardboard, wood pallets, used oil, metals, plastic and glass. If possible, source separate and send to appropriate recycling facility.

Dispose: This is the last option for material that no longer appears to have any reuse capabilities and is a material that cannot be recycled. This material (e.g. food waste, aircraft cabin waste) should be sent to a licensed disposal facility.

In order to apply the waste management hierarchy, identify all waste streams, including aircraft waste and note the most common method of disposition of each waste type. Consider developing a waste minimization plan for the facility based on the waste management hierarchy. The plan should define strategies for waste minimization based on the analysis of facility waste streams. The plan should be made available to all employees.

Operational Considerations

Tracking

- Characterize waste streams, and evaluate the process generating the waste. Do not mix wastes that have not been characterized as hazardous or non-hazardous.
- Determine whether waste is considered to be hazardous or non-hazardous. This determination can be made by acknowledgment of the process generating the waste and the type of waste material (ignitable, reactive, corrosive, RCRA listed waste, etc.) or by chemical analysis.
- Avoid mixing hazardous and non-hazardous wastes to minimize the quantity that must be disposed in accordance with hazardous waste regulations.

TARGETED ACTIVITIES

- Aircraft cabin cleaning
- Maintenance activities
- Building Cleaning
- Solid waste storage
- Liquid waste storage
- Hazardous waste storage
- Solid waste disposal
- Hazardous waste disposal
- Used oil disposal
- Transformer inspection
- Oil and grease
- Vehicle fluids
- Recyclables
- Solvents/cleaning solutions
- Hazardous wastes
- Aircraft lavatory wastes
- Used paints
- Metals
- Dumpster wastes
- Sediment
- Landscape waste

KEY APPROACHES

- Streamline operations to minimize waste generation
- Provide sheltered waste storage
- Recycle
- Use only licensed firms for waste carting and disposal
- Maintain records of waste generation and disposal
- Obtain appropriate registrations (state and federal) for hazardous waste generation
- Provide employee training in waste handling, storage and disposal

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BMP 13

WASTE MANAGEMENT

Operational Considerations (Continued)

Tracking (Continued)

- Track waste generated. Maintain list of and amount of material disposed.
 - If more than 100 kilograms of hazardous waste (or 1 kilogram of acutely hazardous waste) are generated or disposed in one month, the facility must register with EPA as a hazardous waste generator and must follow all hazardous waste management procedures required by NYSDEC for either Small Quantity Generators (SQGs) or Large Quantity Generators (LQGs).
 - 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.
 - Prepare inventory reports.
 - Record data on chemical spills.
 - Characterize emissions.
 - Include shelf life expiration on inventories.
 - Maintain documentation of hazardous waste disposal manifests, exception reports, and land ban certificates for a minimum of three years.

Storage

- Segregate incompatible wastes. Identify and mark proper storage areas for each type of waste stream (e.g. used oil, general trash, spent solvent, etc.)
- Use only dumpsters with plugged drain holes to prevent leaks from waste materials or run-through of liquid wastes and/or rainwater.
- Cover dumpsters and keep them closed and locked to reception of unsolicited waste and to minimize accumulation of wastewater.
- Locate waste storage areas (including drums, debris piles, etc.) beneath cover, if possible, or enclose or berm the waste storage area to prevent run-on or runoff contact with surface water.
- Perform regular housekeeping activities in waste storage areas and surroundings.
- Avoid waste handling and storage in areas of storm drain inlets/catch basins.
- Label hazardous waste containers with the date accumulation began and the type of waste stored in the container.
- Label all used oil containers with the words “used oil.”
- Store containers of used oil and liquid hazardous waste in secondary containment.

Disposal

- Maintain a list of disposal contractor names and phone numbers.
- Source separate recyclables and recycle materials whenever possible. If the facility’s waste hauler source separates for the facility, the facility should request written confirmation that this occurs.
- Verify proper waste disposal practices (including recycling) of contractors.
- Schedule waste pickup as frequently as necessary to keep storage of waste to a minimum and to avoid overloaded/overfilled disposal containers.
- For hazardous waste, use only licensed haulers and disposal facilities.
- A manifest must accompany hazardous waste shipments by LQGs and SQGs.
- Label hazardous waste containers being shipped off-site with shipper’s name, manifest number and emergency phone number.
- Properly dispose of landscape waste, washwater, sweepings, and sediments. Speak to your solid waste disposal company for wastes they will and won’t accept as well as waste segregation requirements.
- Properly dispose of PCB waste as a hazardous waste.

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BMP 13

WASTE MANAGEMENT

Wastewater Discharges

- Clean any catch basins that receive stormwater runoff from maintenance areas on a regular basis. Use a vacuum truck to remove accumulated materials. Do not flush any wastes into receiving waters. See BMP-8.
- Prevent leaks from dumpsters and compactors from entering storm drains.
- For equipment that does not blowdown continuously, collect blowdown in a container and properly dispose with other oily waste waters; do not dispose into storm drain or floor drains.
- Avoid discharges of wastewater into floor drains, by sealing floor drains in areas where industrial wastewater is likely to be discharged.
- Ensure that equipment that blows down continuously is not discharging to the storm sewer; if equipment discharges to sanitary sewer, check with POTW for permissible discharge limits.
- Clearly mark storm drains for easy identification and prevention of illicit discharges.

Miscellaneous

- Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation.
- Find substitutes for harmful chemicals - properly dispose of unusable chemical inventory.
- Encourage employees to recommend areas where operations can be altered to minimize waste generation.

Contingency Response

- 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.
- Collect outdoor washdown water and properly dispose of it through a permitted connection to an approved treatment facility. Approval from treatment facility required for discharge.
- Report all spills to the appropriate regulatory agencies.

Inspection and Training

- Provide the appropriate level of employee training in the following areas; spill response and prevention, stormwater pollution prevention education, right-to-know awareness training, waste minimization techniques, and hazardous materials management. Include periodic refresher training.
- Perform and document in a log book periodic inspections of hazardous and non-hazardous waste storage areas. Inspection items should include the following:
 - 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).

APPROACH TO FUTURE FACILITY DESIGNS AND UPGRADES:

- 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 drawings for all projects. Keep a set of the drawings at the facility.
- Design projects to include adequate waste storage areas at locations near waste generation 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.

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BMP 13

WASTE MANAGEMENT

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Part 368 Recycling Emblems
- 6 NYCRR Parts 325 and 326 Pesticide Storage, Handling, and Disposal
- NYS Environmental Conservation Law, Article 33
- 6 NYCRR Parts 370-374 New York State Hazardous Waste Management Regulations
- 6 NYCRR Part 360 New York State Solid Waste Disposal Regulations
- 6 NYCRR Part 376 New York State Land Disposal Restrictions
- 29 CFR 1910 (Subparts G, H, I, J and K) Hazardous Materials, Environmental Controls, and Personnel Protection
- 29 CFR 1910 Subpart N- Material handling and Storage
- 29 CFR 1910.1200 OSHA Hazard Communication Standard
- 40 CFR 112 Oil Pollution Prevention for Spill Prevention and Control and Countermeasure (SPCC) Plans
- 40 CFR 122 National Pollutant Discharge Elimination System (NPDES) Regulation
- 40 CFR 260-262, 268, and 270-272 Hazardous Waste Management
- 40 CFR 302 Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- 40 CFR 372 Toxic Chemical Release Reporting: Community Right to Know
- 40 CFR 761 Toxic Substances
- 40 CFR 171-173, 175 and 177 Department of Transportation Regulations
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines

Port Authority of New York and New Jersey
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BMP 14

FIRE FIGHTING FOAM DISCHARGE

PURPOSE:

Eliminate discharges to the storm drain system associated with flushing or testing of fire fighting foam systems.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- Fire fighting foam testing operations include run-up of equipment and brief discharge of fire fighting suppressant.
- Perform fire fighting foam testing operations only in areas designated by the Port Authority as appropriate for such activities.
- Properly dispose of, or recycle, foam discharge. Discharge is collected, drummed and transported to an approved and permitted facility.
- Clean and maintain collection vault, as necessary

Contingency Response

- Maintain adequate supplies of spill response equipment and materials in accessible locations near area of activity

Inspection and Training

- 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 BMP-15 for storm water pollution education approaches), right-to-know awareness training, and hazardous materials management.

LIMITATIONS:

- Some wastewater agencies may require pretreatment and monitoring of this type of discharge to the sanitary sewer.

TARGETED ACTIVITIES

- Fire Fighting Equipment Testing

TARGETED POLLUTANTS

- Volatile organic compounds

KEY APPROACHES

- Perform testing operations in designated areas
- Properly dispose or recycle, foam discharge
- Service sump regularly

BMP 14**FIRE FIGHTING FOAM DISCHARGE****APPROACH TO FUTURE FACILITIES AND UPGRADES:***Design of New Facilities and Existing Facility Upgrades*

- Design testing facility with the following characteristics:
 - 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.

RELEVANT RULES AND REGULATIONS:

- 40 CFR 122-124 NPDES Regulations for Storm water Discharges
- 40 CFR 401 Effluent Limitation Guidelines

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BMP 15

STORM WATER POLLUTION PREVENTION EDUCATION

PURPOSE:

Prevent or reduce the discharge of pollutants to storm water from activities through implementing an education program targeting employees, vendors, and the public.

APPROACH TO FUTURE FACILITIES AND UPGRADES:

Design of New Facilities and Existing Facility Upgrades

- 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.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Contingency Response

- 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.

Inspection and Training

- Perform and document in a log book 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:
 - 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 equipment.

TARGETED ACTIVITIES

- 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 Equipment Testing
- Potable Water System Flushing
- Runway Rubber Removal

TARGETED POLLUTANTS

- Oil and Grease
- Vehicle Fluids
- Fuel
- Solvents/Cleaning Solutions
- Deicing/Anti-Icing Flui
- Battery Acid
- Pesticides/Herbicides/
Fertilizers
- Paint
- Aircraft Fire Fighting Foam
- Metals
- Dumpster Wastes
- Sediment
- Landscape Waste
- Floatables
- Lavatory Chemical Wastes
- Potable Water System
Chemicals
- Rubber Particles

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BMP 15

STORM WATER POLLUTION PREVENTION EDUCATION

Inspection and Training (Continued)

- Design storm water pollution education programs to contain the following elements:
 - 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.

KEY APPROACHES

- Perform inspections and enforcement
- Provide training for employees
- Promote education of vendors/public

REQUIREMENTS:

- 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:

- The success of educational programs is difficult to measure. Acceptance and awareness are critical factors.

RELEVANT RULES AND REGULATIONS:

- 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

Port Authority of New York and New Jersey
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BMP 16

**STREET SWEEPING & STORMWATER FACILITY
MAINTENANCE**

PURPOSE:

The solids and floatable control aspect of the SWPPP focuses on using preventive measures to reduce the amount of solids and floatable materials entering the storm system. Many solids on the street come from pavement, tire and vehicle equipment wear, and often contain heavy metals and petroleum products. Solids are also produced by erosion along roads.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Street sweeping

The Port Authority will perform landside roadway sweeping on all airport roadways and curbed streets daily from Spring through Fall. The Port Authority will strive to sweep all roadways at least three times a week. All aeronautical areas and roadways will be swept a minimum once a week. Port Authority employees will inspect the stability of shoulders, embankments, ditches and soils along the streets at least twice a year. Eroding sites will be repaired. Roadway and curbed street sweeping will be performed as necessary during winter months.

Stormwater Facility Maintenance

The Port Authority is required to maintain all stormwater facilities to ensure that they are properly functioning and operating at the designed efficiency. A catch basin is a vault or a chamber that is usually associated with the storm drain inlet along the street. The catch basin usually has the capability to trap debris and some sediment before they travel farther into the storm system. If catch basins are not cleaned periodically, they may fill up with debris and stop functioning properly. To mitigate that possibility, the Port Authority inspects the catch basins periodically and they are cleaned as necessary. All sediment and debris from roadway runoff are removed and the vault is vacuumed out.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- NYS Environmental Conservation Law, Article 33
- 40 CFR 112 Oil Pollution Prevention for Spill Prevention and Control and Countermeasure (SPCC) Plans
- 40 CFR 122 National Pollutant Discharge Elimination System (NPDES) Regulation
- 40 CFR 171-173, 175 and 177 Department of Transportation Regulations
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines

Port Authority of New York and New Jersey
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BMP 17

Security

PURPOSE:

Toughened security began before the new Aviation Security and Transportation Act of 2001 became law on November 19, 2001. However, heightened procedures have been implemented for extra precaution. Criminal background checks on all airport employees have begun and must be completed by year-end. Carry-on bags are searched more carefully, and passengers' names are crossed-checked with lists of people the Federal government deems suspicious.

In addition, the Port Authority of New York and New Jersey recently announced additional implementation of airport security measures that will require all current and prospective employees who have access to secure areas of airports to undergo fingerprinting and criminal history background checks.

The Port Authority also will implement these additional measures the airport:

- **Advancing Perimeter Security Improvements:** The Port Authority is testing the deployment of a combination of advanced security technologies-such as ground-based radar and state-of-the-art motion sensors-to bolster surveillance of airport perimeters that will improve detection of unauthorized intrusions.
- **Improving Access Control:** The Port Authority is pilot testing new centralized access control systems at airport security doors and gates that use biometric technology to scan fingerprints.
- **Making Greater Use of Closed Circuit TV:** High resolution, low light or infrared closed circuit television cameras will supplement the perimeter and access control systems to help law enforcement personnel determine the nature of an intrusion or an alarm.
- **Supporting Airline Initiatives Using Biometrics:** A number of airlines will begin to enroll passengers in biometrics based identification programs that will serve to focus security resources more efficiently by speeding the process and enhancing customer service for known, trusted, travelers while at the same time cutting down on identity fraud and illicit use of travel documents. If approved by the federal Transportation Security Administration (TSA), the program, called "Fast Flow," is expected to be widely implemented by many airlines. The Port Authority will assist participating airlines, evaluate the results and explore the possibility of implementing this technology more broadly at PANYNJ airports.
- **The Port Authority is working to coordinate efforts between the TSA and the Airlines to install new checkpoints by November 2007.** These reconfigured checkpoints will have new X-Ray and screening equipment, video screens to tell passengers what to expect and privacy areas for secondary screening.
- **The Port Authority is working closely with Boeing, which has been hired by the TSA in install a mix of Explosive Detection Systems and Explosive Trace Detection equipment in terminals.** The goal is to screen 100% of checked baggage for explosives by the end of 2007.
- **New hardened barriers are being installed at aeronautical access gates.**

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BMP 18

RUBBER REMOVAL

PURPOSE:

Eliminate discharges to the storm drain system associated with rubber removal activities. Prevent the discharge of pollutants to soil, groundwater, stormwater, surface water or air.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Implement the following good housekeeping practices and BMPs to prevent and/or reduce stormwater pollution from runway rubber removal operations.

High Pressure Water

The Port Authority's contractor will remove rubber from the runways using high-pressure water. Mobile high-pressure water (no greater than 25,000 psi) is used in a self-contained, truck mounted cleaning system. The equipment is equipped with spray nozzles attached to a spray bar or rotating spray bar. The cleaning system is followed by a vacuum truck to collect the residue. All resulting residue and debris is disposed of at a location off airport property in compliance with all local, State and Federal regulations. The Port Authority has reserved the right to request verification of proper disposal of all material collected and taken off site in accordance with all local, State, and Federal Regulations.

Chemical Pretreatment

If deemed necessary by the Manager of Airport Maintenance Services or appointed representative, chemical pretreatment may be used. Pretreatment chemical for removal shall only be Hurrifsafe 8035 HK288A or an Port Authority approved equivalent. The chemical cannot contain any of the following caustic materials: Sodium Hydroxide, Potassium Hydroxide, Terpenes and D-Limonene. The chemical must certify to USEPA 796.3200 as "Readily Biodegradable", and not be harmful to aquatic life, be non-corrosive to aircraft metals or other metal surfaces, and not emit hazardous fumes or odors. Testing per ASTM-F-519 and/or ASTM-F-483 for Hydrogen Embrittlement and Immersion Corrosion may be required at the option of the Port Authority. The chemical shall effect 100% rubber removal.

Inspection and Training

- Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management.
- Train appropriate employees to implement these procedures.

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- NYS Environmental Conservation Law, Article 33
- 40 CFR 112 Oil Pollution Prevention for Spill Prevention and Control and Countermeasure (SPCC) Plans
- 40 CFR 122 National Pollutant Discharge Elimination System (NPDES) Regulation
- 40 CFR 171-173, 175 and 177 Department of Transportation Regulations
- 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- 40 CFR 401 Effluent Limitation Guidelines

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BMP 19

RUNWAY AND TAXIWAY ANTI-ICING

PURPOSE:

Prevent or reduce the discharge of pollutants to soil, groundwater and/or stormwater from runway and taxiway deicing and anti-icing procedures. The level of biochemical oxygen demand (BOD) associated with the discharge of anti-icing compounds into receiving waters, such as Thurston and Bergen Basins and Jamaica Bay, can result in a decrease in the available oxygen which can impact aquatic life.

APPROACH TO EXISTING FACILITY ACTIVITIES:

Operational Considerations

- Perform training for all personnel involved with anti-icing operations. The training should, at a minimum, include source reduction techniques, best management practices and good housekeeping.
- Depending on weather conditions, apply only enough solid and fluid materials to surfaces to ensure the safety of the runway/taxiway. Excess fluid dripped to the ground may enter directly into the storm drain.
- Utilize state-of-the art multi-function equipment (broom, plow, blower) to mechanically remove snow/ice from pavement. Ensure that staff are adequately trained annually in the use of the equipment.
- Check inclement weather forecasts to limit the frequency of propylene glycol, sodium acetate and potassium acetate to the runways/taxiways.
- The use of ethylene glycol and urea are strictly prohibited at JFK Airport.
- Wash sand used for anti-icing purposes to the edge of the pavement and collect by sweepers if applicable once the pavement is dried.
- Only materials approved by Port Authority may be used for runway and taxiway anti-icing.
- Record quantities of all anti-icing material used daily or by storm event during anti-icing.
- Maintain proper function of in-pavement temperature sensors to determine the concentrations and amount of anti-icing chemical to be applied to the runway/taxiway.
- Pilots shall transmit information on runway take-off and landing conditions back to the PANYNJ.

TARGETED ACTIVITIES

- Runway anti-icing
- Taxiway anti-icing

TARGETED POLLUTANTS

- Propylene glycol
- Potassium acetate
- Sodium acetate
- Ethylene Glycol (strictly prohibited)
- Urea (strictly prohibited)

KEY APPROACHES

- Apply only required amounts of fluid and solid material
- Educate personnel about the use of anti-icing agents.
- Report propylene glycol (ethylene glycol is strictly prohibited) releases to appropriate regulatory agencies

RELEVANT RULES AND REGULATIONS:

- The Port Authority of New York and New Jersey Rules and Regulations as well as other applicable policies, procedures and tenant agreements
- 6 NYCRR Parts 595-599 Chemical Bulk Storage Regulations
- 6 NYCRR Parts 370-374 New York State Hazardous Waste Regulations
- 6 NYCRR Part 360 Solid Waste Regulations
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for StormWater Discharges
- 40 CFR 302 Designation of Reportable Quantities and Notification Requirements for Hazardous Substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- 40 CFR 372 Toxic Chemical Release Reporting: Community Right-to-Know
- 40 CFR 401 Effluent Limitation Guidelines