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PHX DVT GYR
CITY OF PHOENIX AVIATION DEPARTMENT

Stormwater Quality

QUARTERLY NEWSLETTER DEVOTED TO STORMWATER POLLUTION PREVENTION AT THE THREE PHOENIX AIRPORTS

SPRING 2012 | Written by CDM Smith and EEC

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Welcome to the spring edition of the Stormwater Quality Newsletter. In this edition, we conclude the series on common pollutant sources at airports. This issue will discuss solid waste at airport tenant facilities, including landscape waste, trash, foreign object debris (FOD), batteries, dust, sediment, and material accumulated in bone yards. In addition, the control measure highlight article discusses Material Safety Data Sheet (MSDS) requirements.

Common Airport Pollutants: Solid Wastes

For the final article in the Common Airport Pollutant Series, solid waste as stormwater pollutants will be discussed. Solid waste include landscape waste (i.e., grass clippings, tree branches, etc.), trash, foreign object debris (FOD), batteries, dust, sediment, and material accumulated in bone yards.

Landscape Waste

Landscape waste is a targeted pollutant for the building and grounds maintenance control measures (CMs). To minimize the chance of landscaping waste becoming a stormwater pollutant, properly dispose of landscape waste, wash water, and sweepings. Landscape waste and sweepings should be disposed of in dumpsters or trash cans with lids. Wash water should be disposed of in janitorial sinks that go to the sanitary sewer. In addition, tenants should incorporate landscaping design features during project design to increase stormwater infiltration, which results in less stormwater runoff discharge from a site. Other design considerations include planting native vege-

tation to reduce irrigation, fertilizer, and pesticides. Selecting native Arizona vegetation may also reduce the amount of required maintenance and pest control. Another consideration is to incorporate stormwater detention and reten-



Using native vegetation may reduce landscape waste. Source: CDM Smith

tion features to reduce peak runoff flows.

Trash and FOD

Trash and FOD are targeted pollutants for facility and material storage area CMs. Trash and FOD are potential stormwater pollutants and are addressed in the *Litter, Garbage, and Floatable Debris* CM, a new category in the Multi-Sector General Permit (MSGP-2010). To reduce trash and FOD as potential pollutants, it is important to adequately maintain the garbage collection and dumpster areas by:

- Provide shelter and secondary containment for dumpsters, if possible.
- Use covered dumpsters and keeping them closed.
- Ensure drain holes are plugged to prevent discharge of leachate and fluids.
- Completely drain liquid waste containers prior to disposal.
- Perform dumpster cleaning in designated areas that are bermed to contain wash water for subsequent disposal or discharge to

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Stormwater Pollution Prevention Plans

For more information on the Phoenix airports' SWPPPs, visit:

PHX: <http://skyharbor.com/stormwater.html>

DVT: <http://deervalleyairport.com/tenants/environmental.shtml>

GYR: <http://goodyearairport.com/about/news.shtml>

Control Measure Highlight: Material Safety Data Sheets

Material Storage Areas, Control Measure (CM) 5.1 – Material and Waste Handling, requires facilities to “maintain current hard (i.e., paper) copies of Material Safety Data Sheets (MSDSs) for those chemicals likely to have stormwater exposure.” As a safety requirement, tenants are required to have MSDSs easily accessible to their employees. MSDSs provide product-specific spill response guidance and having them readily available in the event of a spill allows response personnel to react quickly and safely. Many tenants have their MSDSs available electronically via the internet or a designated phone number. However, as part of the stormwater program, tenants must have hard copies of MSDSs for any chemical with the potential to be used, stored, or accidentally spilled out-



Material Safety Data Sheets.
Source: EEC

side.

MSDSs provide employees and emergency personnel with procedures for handling or working with chemicals in a safe manner. While there is no required format for MSDSs currently, they must include specific information. However, the government is considering regulations to make the formatting consistent between different chemicals and manufacturers. The Occupational Safety and Health Administration’s (OSHA) Hazard Communication Standard (HCS) 29 CFR 1910.1200 requires

specific information to be included, such as:

- Physical data (e.g., melting point, boiling point, flash point, etc.)
- Toxicity
- Health effects
- First aid
- Reactivity
- Storage recommendations
- Disposal requirements
- Personnel protective equipment
- Spill-handling procedures.

MSDS accidental release measures discuss spill hazards such as toxic vapors, flammability, or slippery surfaces and recommend spill recovery measures including using absorbent materials or vacuum trucks.

MSDSs are typically included with the delivery packing slip when chemicals, hazardous materials, or other products are delivered. If your products did not come with MSDSs, either contact your supplier or visit the suppliers website, since most manufacturers have product MSDSs publicly available to download.

The requirements for MSDS availability have changed in recent years, which have led to some confusion on what types of MSDSs are required. Approximately three years ago, the Aviation Department required facilities that use or store chemicals or hazardous materials to have paper copies of MSDSs for all materials used or stored on-site, regardless of their potential for stormwater exposure. At that time, many facilities had adopted electronic databases or contracted with commercial providers supplying electronic MSDS information and were not retaining any hard copies. Many Pollution Prevention Team (PPT) members preferred the electronic MSDS services because facilities could easily receive the most up-to-date information for a wide-range of products and decrease the amount of paper sitting on their shelves. The Aviation Department understood that it was burdensome and wasteful to require hard copies of all MSDSs and agreed that the electronic system was adequate for products

stored and used indoors. However, the Aviation Department still requires paper copies for materials with the potential for stormwater exposure (meaning any product or material that has the potential to be used, stored, or accidentally spilled outside). Reasoning behind continuing the hard copy requirement is that if



MSDSs posted near spill response kit. Source: EEC

there was a power outage, MSDS information may not be available to assist those that are responding to spills and leaks. For facilities that have a back-up generator that automatically activates in the event of a power outage, the facility may receive an exemption from the hard copy requirement. If you believe this situation applies to your facility, please contact Lisa Farinas in the Planning & Environmental Division for more information (602-273-2787).

CM 5.1 does not dictate where to keep MSDSs (only that they be maintained on-site). However, the Aviation Department suggests that information be kept in an area easily accessible to response personnel. If there is a spill outside and the MSDSs are locked in a supervisor’s office, it is not going to help employees responding to the spill. To avoid potential accessibility issues, it is suggested that tenants keep pertinent MSDSs in

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ANSWERS TO WINTER EDITION TEST TIME

1. True or False? While solvents can be considered a stormwater pollutant, they are also used to minimize stormwater pollution.

True. Solvent-based cleaners may be used to minimize stormwater pollution when used to clean exterior surfaces of aircraft, vehicles and equipment (AVE) of excessive amounts of external oil and grease buildup. Solvents may also be used to clean oil, grease, or chemical residue off exterior surfaces prior to long-term AVE storage.

2. Where is the appropriate location to discharge lavatory waste?

At PHX, the appropriate lavatory waste discharge point is the Triturator Facility located between Terminals 2 and 3. For the approved GYR tenant, it is at a dedicated manhole that flows directly to the sanitary sewer system. DVT fixed base operators (FBOs) dispose of lavatory waste in designated manholes or sinks that drain directly to the sanitary sewer system.

3. Will the web accessible stormwater training program replace the annual PPT training sessions held in December?

The web accessible stormwater training will NOT replace the annual PPT training sessions in December.

4. Who is responsible for paying the stormwater permit fees to ADEQ?

The City of Phoenix Aviation Department will be paying the fees related to the Multi-Sector General Permit (MSGP) for all airport tenants.

Common Airport Pollutant: Solid Wastes

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the sanitary sewer.

- Keep the area surrounding dumpsters clean and free of litter, garbage, and floatable debris.
- Provide an adequate number of trash receptacles with lids throughout tenant facilities which helps to minimize trash and FOD.



Battery improperly stored outdoors. Source: CDM Smith & EEC

vehicle batteries are lead-acid based, and can be recycled under 40 CFR 266 Subpart G. Batteries should be stored indoors, away from the elements, and within a secondary containment unit.

Dust and Sediment

Dust and sediment are targeted pollutants for facility-wide and building and ground maintenance CMs. One of the new CM categories required by MSGP-2010 is *Dust Generation and Tracking of Industrial Materials*. To minimize dust generation, tenants should monitor and clean dust and debris in less-traveled areas of the facility. Examples of less-traveled areas include, but are not limited to, beneath and around dumpsters, along the perimeter of the facility (i.e., along the fence line), and in outdoor storage areas. Paving non-landscaped areas helps to minimize dust genera-

tion. Once the pavement is installed, it is important to regularly clean these outdoor paved areas and then capture and properly dispose of wash water.

Bone Yards

“Bone yards” or outdoor waste collection areas, should be eliminated from tenant facilities. These areas tend to conceal and lead to mismanaged waste and materials. Material Storage Area CM 5.8 addresses elimination of bone yards.

There are many potential pollutants associated with the industrial activities conducted at the City of Phoenix airports. With regular maintenance, inspections, and employee training, the risk of polluting stormwater is minimized.

Batteries

Batteries and battery acid are targeted pollutants for the following



Dumpster lid open. Source: CDM Smith & EEC

- Facility-Wide,
- Aircraft, Vehicle, and Equipment (AVE) Maintenance, and
- Material Storage Areas.

Batteries are a potential stormwater pollutant as battery acid can leak from battery shells and become a hazardous material. The Stormwater Pollution Prevention Plan (SWPPP) recommends recycling used batteries no later than 30 days after use to promote recycling of materials and reduction of waste. Automotive and aircraft batteries may be recycled. Most

Spill Prevention, Control, and Countermeasure (SPCC) Plan Rule

During the annual comprehensive facility inspections (CFIs) in January 2012, questions arose regarding the Spill Prevention, Control, and Countermeasure Plan (SPCC) Rule. According to 40 CFR 112, facilities are required to develop a SPCC Plan if there is an aggregate above ground storage tank (AST) capacity greater than 1,320 gallons, which includes mobile refuelers, or an underground storage tank (UST) capacity greater than 42,000 gallons and there is a reasonable expectation of a discharge into navigable waters of the United States.

The SPCC Rule applies to USTs unless the tanks are “...currently subject to all

Facilities with 1,320 gallons of aboveground storage tank capacity or 42,000 gallons of underground storage tank capacity that is not regulated by 40 CFR 280/281 requirements must have a Spill Prevention, Control, and Countermeasure (SPCC) Plan.

of the technical requirements of part 280 of this chapter [40 CFR] or all of the technical requirements of a State program approved under part 281 of this chapter...”. The majority of the USTs at the City of Phoenix airports are subject to the requirements of the delegated state UST program as required by 40 CFR 281. Therefore, if a facility has the minimum 42,000 UST capacity, but does not have the minimum 1,320 AST capacity, then they are not subject to the SPCC Rule.

In addition, the following types of USTs are exempt from the requirements of 40 CFR 280/281 and thus should follow the SPCC Rule if the combined capacity is greater than 42,000 gallons:

- UST systems holding hazardous wastes subject to

Subtitle C of the Federal Solid Waste Disposal Act;

- Equipment or machinery that contains regulated substances for operational purposes, such as hydraulic lift tanks and electrical equipment tanks;
- Emergency spill or overflow containment UST system that is expeditiously emptied

after use (i.e., spill containment tanks at fueling areas); and

- UST systems used for storing heating oil for consumptive use on the premises, including USTs that contain used motor oil or diesel fuel being used in lieu of heating oil.

Other types of tanks are exempt from some or all of the technical

Stormwater Fees

As discussed previously, the Arizona Department of Environmental Quality (ADEQ) now requires stormwater permit fees for each facility based on the size listed on the facility’s Notice of Intent (NOI). The City of Phoenix Aviation Department will pay these fees for all airport tenants.

ADEQ may send an invoice for these stormwater permit fees to your facility. If you receive a stormwater permit invoice, please fax or email a copy to Lisa Farinas to ensure payment by the Aviation Department.

Lisa Farinas
City of Phoenix
Aviation Department, Terminal 3
Planning & Environmental
Division
Phone: 602-273-2787
Fax: 602-273-3472
Email: lisa.farinas@phoenix.gov

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Spill Prevention, Control, and Countermeasure (SPCC) Plan Rule

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requirements, such as release detection, of the UST regulations and are therefore subject to SPCC requirements, if the UST capacity is greater than 42,000 gallons. Exempt tanks include:

- Airport hydrant fuel distribution systems;
- UST systems with field-constructed tanks; and
- UST systems that store fuel solely for use by emergency power generators (deferred from the release detection requirements only).

The U.S. Environmental Protection Agency (USEPA) is [proposing changes](#) to the UST rule that would bring storage tanks for emergency generators under the 40 CFR 280/281 rules. Thus, this would make these types of tanks exempt from the SPCC Rule. The public comment period is currently open.

As a reminder for those tenants with



Fuel tanks. Source: CDM Smith & FEC

a SPCC Plan, regardless of the capacity of the USTs or the regulator status of these tanks, all USTs at the facility must be shown on the SPCC site plan.

The “Best Management Practice Highlight” article in the [Summer 2011 Pollution Prevention Team Quarterly Newsletter](#) covers the requirements in more depth. Please see the stormwater website on skyharbor.com.

Control Measure Highlight: Material Safety Data Sheets

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or near spill response kits. Mobile providers (such as wash service providers, maintenance providers, and refuelers), that use or store chemicals or hazardous materials, should carry appropriate MSDSs in their work vehicles.

To review CMs described in the SWPPP, please visit the stormwater website at <http://skyharbor.com/stormwater> and select the Stormwater Pollution Prevention Plan [PDF] link.

Tenant of the Quarter – Avis Budget Group

During this year’s comprehensive facility inspections (CFI), Avis Budget Group (ABG) stood out for their progress in product substitution. The Stormwater Pollution Prevention Plan (SWPPP) includes Facility-Wide CM 1.4 – Product Substitution. This control measure recommends using biodegradable products and substituting materials with less hazardous properties where feasible.

Prior to 2011, ABG used concentrated degreasers, cleaners, and soaps to clean vehicles in their



RTX Series Cleaners. Source: www.bradley-systems.com



Avis Budget Group Logos. Source: www.avisbudgetgroup.com

rental fleet. Concentrated cleaning products were delivered in 5-gallon containers that were discarded as trash once the products were mixed with water. The products required health-warning labels on all containers and required employees using these products to wear safety glasses and rubber gloves.

In 2011, ABG switched over to Bradley Systems, Non-Toxic Cleaning Solutions. ABG now uses RTX-3 Car Wash Soap, RTX-9 All Purpose Cleaner, and RTX-15 Glass Cleaner. Not only are these products cheaper than the original products, but they also are safer for the employees, have no

special disposal requirements, utilize recycled (or recyclable) packaging, are biodegradable, and are just as

effective as the original products. Switching cleaning products resulted in a 30 to 40 percent savings on chemical costs and reduced spending on personal protection equipment. The non-toxic materials eliminated employee injuries related to the cleaning products and, generally, reduced ABG’s environmental footprint.

Due in part to this positive outcome at PHX, ABG has now adopted the new products nationwide. Thank you ABG for your proactive efforts in minimizing the amount of harmful materials in use at Phoenix Sky Harbor International Airport.

SPRING TEST TIME

1. What is the best way to minimize landscape waste as a potential stormwater pollutant?
2. True or False? Hard (i.e., paper) copies of MSDSs are required for all chemicals stored and/or used at a facility?
3. What is the longest time frame that batteries should be stored at a facility before disposal?
4. Are all facilities with oil or fuel storage tanks required to develop a SPCC Plan?

PHX DVT BYR

CITY OF PHOENIX AVIATION DEPARTMENT

[Click here to enter date]

Ms. Lisa Farinas
City of Phoenix Aviation Department
Planning & Environmental Division
3400 East Sky Harbor Boulevard, Suite 3300
Phoenix, AZ 85034

Subject: Spill Prevention, Control, and Countermeasure (SPCC) Plan
Annual Review Certification

Dear Ms. Farinas:

This letter certifies that "[Click here to enter your full facility name]" reviewed their facility Spill Prevention, Control, and Countermeasure (SPCC) Plan (Plan) on "[Click here to enter date you reviewed SPCC]". In the past year, there has not been a change in the facility's design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge. As such, the facility has not:

1. Commissioned or decommissioned any containers;
2. Replaced, reconstructed, or moved any containers;
3. Reconstructed, replaced, or installed any piping systems;
4. Conducted any construction or demolition that has altered secondary containment structures;
5. Changed any products or services; or
6. Revised the standard operation, modified testing/inspection procedures, or used new or modified industrial standards or maintenance procedures.
7. Change in the name or contact information of individuals responsible for the implementation of this Plan; or
8. Change in the name or contact information of spill response or cleanup contractors.

We understand that if one of changes occurs, an amendment is required to the Plan. A technical amendment must be made to the Plan to address changes and be certified by a Professional Engineer (PE) if Changes 1 through 6 occur. A Manager may do non-technical amendments, including Changes 7-8.

PHX DVT GYR

CITY OF PHOENIX AVIATION DEPARTMENT

Ms. Lisa Farinas

[\[Click here to enter date\]](#)

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In the future, if an amendment is required, we understand that it must occur no later than six (6) months after the change occurs and that the Plan must be implemented as soon as possible following any technical amendment, but no later than six (6) months from the date of the amendment. Once the Plan has been amended, we will send in a revised and certified copy to the City of Phoenix Aviation Department.

Very truly yours,

[\[Click here to enter name\]](#)

[\[Click here to enter title\]](#)

["\[Click here to enter facility name\]"](#)

cc: [\[Click here to enter name\]](#)