

AIRCRAFT, VEHICLE & EQUIPMENT FUELING

BMP FACTSHEET 7

Rev. 04/2023



Targeted Pollutants

Sediment	X
Nutrients	
Trash	
Metals	X
Bacteria	
Oil & Grease	X
Chemicals	
Salt	X

Objectives

Cover	X
Contain	X
Educate	X
Reduce/Minimize	X
Product Substitution	

DESCRIPTION

Many facilities on Ft. Belvoir operate aircraft, vehicles and other types of equipment. It is very important to follow proper procedures when fueling equipment and managing fuel sources so byproducts of these activities **do not** come into contact with stormwater. The goal of establishing procedures for fueling aircraft, vehicles and equipment is to prevent unnecessary and unlawful discharges of harmful pollutants into our waterways.

GUIDELINES

- Keep good housekeeping practices. Reference BMP Factsheet Overview for more details.
- Developing a fuel tracking system to keep track of fuel usage and locations of fuel.
- Cover fueling areas whenever possible. Fueling areas should be on a surface that prevents liquids from penetrating the surface and does not allow the liquid to seep into the ground constructed of concrete, asphalt, or any other impervious surface that will contain gas, oil or other fluids.
- Fueling areas should be located away from surface waters, storm drain, and private and public water supply wells. In addition, fuel tanks should be located away from heavily trafficked areas.
- Divert storm water runoff away from fueling areas to avoid storm water contact with contaminated surfaces through the use of berms or curbing. If storm water runoff is not diverted around fueling areas, install the appropriate structural control (e.g. oil/water separators) to minimize discharges of hydrocarbons and oil & grease to storm sewer systems.
- Regularly monitor fueling areas and install proper monitoring and fuel recovery equipment at fueling locations.
- Observe a no "Topping Off" rule.



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MAINTENANCE/GOOD HOUSEKEEPING

Fueling Process BMPs

- Avoid overfilling aircraft, vehicles or equipment during fueling operations.
- When fueling, use secondary containment, such as a drain pan or drop cloth, to catch spills/leaks.
- Provide secondary containment around fuel storage containers **and during transfers**.
Secondary containment must be provided for all fuel containers and be in place during refueling activities involving transfers of fuel from “onroad” delivery trucks, “offroad” tank trucks or portable containers to field equipment.
- Train employees on the proper fueling procedures and spill response procedures.
- Use adsorbent materials on small spills rather than hosing down. Remove the adsorbent materials promptly and dispose of properly.
- Make sure Spill Response Procedure Cards are posted and easily accessible along with spill response equipment and materials in locations near areas where spills may occur.

Fuel storage (ASTs and USTs – Above/Underground Storage Tanks)

- Fuel tanks should be built and tested in accordance with industry and other specified regulatory standards. Contact the Petroleum Program Manager at (703) 806-3694 for any additional requirement.
- Fuel tanks must be vented so fumes can escape, reducing the potential for ruptures and collapses. Existing USTs should be upgraded with leak detection, spill containment, spill and overfill protection.
- Store fuels in sealed, clearly labeled containers (specifying contents). Containers must be closed and sealed at all times, except to add or remove fluids.
- Certain fuels can be very corrosive. Ensure the equipment coming into contact with corrosive contents (including the tank itself) is made of a corrosion resistant material such as high density polyethylene, stainless steel or glass fiber.
- Tanks and containers must be located on level ground with an impervious floor surface constructed of concrete, asphalt, or any other impervious surface that will contain gas, oil or other fluids in use.
- Tanks should be painted with a light color and be rust free.
- Fuel containers should be **labeled** as to contents, size, last internal inspection, safe gauge height and year built. Make sure **signs** on containers are visible and legible.
- Tanks must have overfill protection, which includes direct vision gauges, high liquid level alarms, flow restrictions or high liquid level shut-off devices.
- All fuel containers **must have** secondary containment.
- Maintain adequate supplies of spill response equipment and materials in locations accessible to and near areas where spills may occur.

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INSPECTIONS

The Spill Prevention, Control and Countermeasure Plan (SPCC) rule requires that you:

- Test or inspect **each** aircraft, vehicle and equipment for integrity on a regular schedule and whenever you make material repairs.
- Frequently inspect the outside of equipment for signs of deterioration and discharges. This visual inspection is intended to be a routine walk-around and include the equipment's supports and foundations.
- Identify in your SPCC Plan the type and frequency of testing and inspection for each aircraft, vehicle and equipment and the appropriate qualifications of personnel performing the tests and inspections. You must retain testing and inspection records for 3 years. EPA recommends that formal test records or reports be retained for the life of the container.
- Integrity testing is required for all aboveground bulk storage containers to determine if the container (e.g. a tank) is suitable for continued use until the next formal inspection.

SPILL PREVENTION

Common causes of spills at facilities include:

- **Operator error**
 - ⇒ “Topping off”
 - ⇒ Containers left open
 - ⇒ Poor fueling procedures
 - ⇒ Lack of product monitoring
 - ⇒ Potential problems not recognized
 - ⇒ Poor maintenance practices
- **Storage Tank Problems**
 - ⇒ Tank design and construction
 - ⇒ Inadequate foundation or tanks sitting directly on the ground
 - ⇒ Tank bottom and seams rusted, shell pitted, weeping or leaking
 - ⇒ Improper venting

SPILL RESPONSE PROCEDURES

In the event of a spill or leak, follow the appropriate Spill Response Procedures posted at your facility or refer to the BMP Factsheet Overview.

- **Survey the incident** from a safe distance. Identify the source of release and the material being released.
- Call the Ft. Belvoir Fire Department if spills are greater than 5 gallons OR greater than 5 square feet. If ANY amount of leaked material has entered a storm drain or waterway call the Ft. Belvoir Fire Department at 703-781-1800 and DPW Environmental Division (Env. Div.) at 703-806-3694.
- Provide the Safety Data Sheet of the spilled material to the spill response personnel.
- Fill out Spill Incident Report in your SWPPP.
- REPORT ALL SPILLS REGARDLESS OF SIZE TO DPW/ENV. DIV.

REPORT SPILLS TO DPW/ENV. DIV. BY:

- E-mailing your Spill Incident Report to zachary.d.witman.civ@army.mil
- Calling 703-806-3694