S409 BMPs for Fueling At Dedicated Stations

Description of Pollutant Sources: A fueling station is a facility dedicated to the transfer of fuels from a stationary pumping station to mobile vehicles or equipment. It includes above or underground fuel storage facilities. Fueling may occur at:

- General service gas stations
- 24-hour convenience stores
- Construction sites
- Maintenance yards
- Warehouses
- Car washes
- Manufacturing establishments
- Port facilities
- Marinas
- Boatyards
- Businesses with fleet vehicles.

Typical causes of stormwater contamination at fueling stations include leaks/spills of fuels, lubrication oils, radiator coolants, and vehicle washwater.

Pollutant Control Approach: New or substantially remodeled* fueling stations must be constructed on an impervious concrete pad under a roof to keep out rainfall and stormwater run-on. The facility must use a runoff treatment BMP for contaminated stormwater and wastewaters in the fueling containment area.

** Substantial remodeling includes (but is not limited to) replacing the canopy, or relocating or adding one or more fuel dispensers in such a way that modifies the Portland cement concrete (or equivalent) paving in the fueling area.*

Applicable Operational BMPs:

- Prepare an emergency spill response and cleanup plan (spill plan) per S426 BMPs for Spills of Oil and Hazardous Substances.
- Train employees on the proper use of fuel dispensers and on the spill plan.

- Have a designated trained person(s) available either on site or on call at all times to promptly and properly implement the spill plan and immediately cleanup all spills.
- If the fueling station is unattended by a trained person during operating hours, the spill plan must be visible to all customers and untrained employees using the station, and the spill kit must also be accessible and fully stocked at all times.
- The person conducting the fuel transfer must be present at the fueling pump during fuel transfer, particularly at unattended or self-serve stations.
- Keep suitable cleanup materials, such as dry adsorbent materials, on site to allow prompt cleanup of a spill.
- Do not use dispersants to clean up spills or sheens, unless properly removed for disposal following application. Dispersants are not allowed to enter storm drains, surface waters, treatment systems, or sanitary sewers.
- Post signs in accordance with the requirements in the International Fire Code (IFC). For example, post “No Topping Off” signs (topping off gas tanks causes spillage and vents gas fumes to the air).
- Make sure that the automatic shut-off on the fuel nozzle is functioning properly.
- Refer to S439 BMPs for In-Water and Over-Water Fueling for BMPs for in-water or over-water fueling operations

Applicable Structural Source Control BMPs:

For new or substantially remodeled fueling stations:

- Design the fueling island to:
    - Minimize stormwater contamination.
    - Control spills (dead-end sump or spill control separator in compliance with the IFC).
    - Collect stormwater and/or wastewater and direct it to an appropriate treatment system.
- Slope the concrete containment pad around the fueling island toward drains; either trench drains, catch basins and/or a dead-end sump. The slope of the drains shall not be less than 1 percent in accordance with the IFC.
- Drains from containment pads must have a normally closed shutoff valve. The valve may be opened to convey contaminated stormwater to oil removal treatment such as an API or CP oil/water separator (see V-14 Oil and Water Separator BMPs), catchbasin insert, or equivalent treatment, and then to a basic treatment BMP (as described in III-1.2 Choosing Your Runoff Treatment BMPs) or to a sanitary sewer, if approved by the sewer authority. Discharges from treatment systems to storm sewer or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain a significant amount of oil and grease.

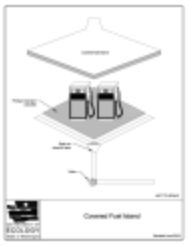
- The spill control capacity must be sized in compliance with the IFC. The spill control capacity may be acquired by either an underground system including a sump, or an above ground containment area consisting of a containment pad with berms.

  The fueling island may be designed as a spill containment pad with a sill or berm raised to a minimum of four inches to prevent the runoff of spilled liquids and to prevent run-on of stormwater from the surrounding area. All stormwater collected on the containment pad must discharge to treatment with a normally closed valve downstream of the treatment.

- The fueling pad must be paved with Portland cement concrete, or equivalent. Ecology does not consider asphalt an equivalent material.

- The fueling island must have a roof or canopy to prevent the direct entry of precipitation onto the spill containment pad (see Figure IV-6.1: Covered Fuel Island). The roof or canopy should, at a minimum, cover the spill containment pad (within the grade break or fuel dispensing area) and preferably extend 3 feet on each side for roofs and canopies 10 feet or less in height and 5 feet on each side for roofs and canopies greater than 10 feet in height. Overhangs reduce the introduction of windblown rain. Measure the overhang relative to the berm or other hydraulic grade break for the spill containment pad.

Figure IV-6.1: Covered Fuel Island



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- Convey all roof drains to storm drains outside the fueling containment area.
- Convey stormwater collected on the fuel island containment pad to a sanitary sewer system, if approved by the sanitary authority, or to an approved treatment system such as an oil/water separator and a basic treatment BMP. (Basic treatment BMPs are listed in III-1.2 Choosing Your Runoff Treatment BMPs). Discharges from treatment systems to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain oil and grease.
- Alternatively, collect stormwater from the fuel island containment pad and hold for proper off-site disposal.
- Approval from the local sewer authority is required for conveyance of any fuel-contaminated stormwater to a sanitary sewer. The discharged stormwater must comply with pretreatment regulations (WAC 173-216-060). These regulations prohibit discharges that could "cause fire or explosion". State and federal pretreatment regulations define an explosive or flammable mixture, based on a flash point determination of the mixture. Stormwater could be conveyed to a sanitary sewer system if it is determined not to be explosive.
- Transfer the fuel from the delivery tank trucks to the fuel storage tank in impervious contained areas and ensure that appropriate overflow protection is used. Alternatively, cover nearby storm drains during the filling process and use drip pans under all hose connections.

Additional BMP for Vehicles 10 Feet in Height or Greater

A roof or canopy may not be feasible at fueling stations that regularly fuel vehicles that are 10 feet in height or greater, particularly at industrial or WSDOT sites. At those types of fueling facilities, the following BMPs apply, as well as the applicable BMPs and fire prevention (IFC requirements) of this BMP for fueling stations:

- If a roof or canopy is impractical, the concrete fueling pad must be equipped with emergency spill control including a shutoff valve for drainage from the fueling area. Maintain the valve in the closed position in the event of a spill. Clean up spills and dispose of materials off-site in accordance with S426 BMPs for Spills of Oil and Hazardous Substances.
- The valve may be opened to convey contaminated stormwater to a sanitary sewer, if approved by the sewer authority, or to oil removal treatment such as an API or CP oil/water separator (see V-14 Oil and Water Separator BMPs), catchbasin insert, or equivalent treatment, and then to a basic treatment BMP (as described in III-1.2 Choosing Your Runoff Treatment BMPs). Discharges from treatment systems to storm sewer or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain a significant amount of oil and grease.