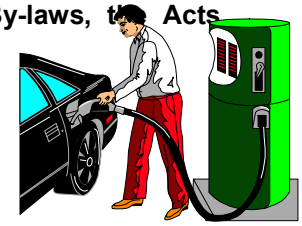
Best Management Practices to Prevent Hazardous Waste from Entering a Stormwater Catch Basin

The operator of a petroleum marketing facility has the responsibility to ensure compliance with all Federal, Provincial and Municipal Acts, Regulations and By-laws applicable to effluent discharges into sewer systems. To assist operators to minimize the risk of hazardous substances entering into sewer systems, Best Management Practices should be followed. **The Best Management Practice (BMP) is a document that, when adopted by a municipality into it's by-law, provides an alternate and efficient sewer discharge management tool. Should there be any discrepancy between the BMP and applicable Federal and Provincial Acts and Regulations and/or Municipal By-laws, the Acts, Regulations and/or By-laws take precedence.**



Retail Facilities

A spill of gasoline, diesel, solvent or lubricating oil that occurs on a pump island pad or facility parking area has the potential of entering a sewer system via a storm water catch basin. To reduce potential risk do the following:

- After ensuring there is no risk of fire or explosion follow the spill response instructions contained in your facility's Emergency Response Plan (ERP).
  - Immediately cover all catch basins using the rubber drain stops from the facility's spill response kit and use sand, soil and/or granular sorbent to dyke around the catch basin.
  - Use rags or the facility's spill response kit sorbents to pick up as much free product as possible.
  - Store the used sorbent in a properly identified container awaiting disposal.

While there is no way to control storm run-off, one can reduce the risk of substances getting into a sewer system by using rags and absorbents to clean up drips and spills. Pump islands and lot should always be swept, not washed down. Washing not only flushes potentially hazardous material into the sewer system it also flushes solid waste, dirt and gravel, paper, etc. that could plug the sewer and/or negatively impact a waste treatment facility.

To further reduce the risk of hazardous substances getting into the sewer, vehicles should never be serviced or washed anywhere on the facility site except in properly constructed service and wash areas.

If the facility has an oil/water separator or Stormceptor®, follow the manufacturer's recommended service and maintenance schedule. Carry out inspection and maintenance activities as follows:

- Oil that is collected in the Stormceptor® Unit after a spill should be removed immediately.
- At least once every twelve (12) months measure the depth of sediment and look for the presence of surface oil. If oil is present, it should be removed immediately. Allowable sediment thickness depends on the size of the unit installed; 200 mm (8 inches) is acceptable for the smaller units.
- After three years, the inspection frequency can be adjusted depending on the history of clean-outs. At a typical site, sediment removal is required once per year.

Additional information on allowable sediment thickness can be obtained from the facility's owner's manual or at www.stormceptor.com.

Use only provincially approved and licensed waste collectors to clean out the separator or Stormceptor®.

Never pour waste liquids of any type into a storm drain.

Record Keeping and Retention

Retain all records for a minimum of two (2) years in a location that can have them available for inspection.

The records should contain:

- Employee name and training dates.
- Inspection dates plus the measured thickness of oil and sludge.
- Clean-out dates and copies of waste manifests showing name of waste removal company.
- Spill details including date, time, spill volume, to who was it reported and by whom, clean up information.
- Analytical results of any effluent sampling.

Best Management Practices (BMP) to Prevent Hazardous Waste from Entering a Stormwater Catch Basin at Bulk Plants, Card/Key Locks, Terminals, Truck Stops and/or Aviation Facilities that have an Oil/Water Separator

The operator of a petroleum marketing facility has the responsibility to ensure compliance with all Federal, Provincial and Municipal Acts, Regulations and By-laws applicable to effluent discharges into sewer systems. To assist operators to minimize the risk of hazardous substances entering into sewer systems, Best Management Practices should be followed. **The Best Management Practice (BMP) is a document that, when adopted by a municipality into it's by-law, provides an alternate and efficient sewer discharge management tool. Should there be any discrepancy between the BMP and applicable Federal and Provincial Acts and Regulations and/or Municipal By-laws, the Acts, Regulations and/or By-laws take precedence.**

Most oil/water separators have a shut-off valve that can be closed in the event of a product spill. Closing the valve isolates the separator's contents until a provincially approved and licensed waste collector can clean it out. Some separators also have a valve on the inlet pipe that isolates the chambers for maintenance purposes.

Both valves should normally be left open and should be readily identified with "Open" and "Closed" positions. An option to valve identification is a schematic posted nearby that details valve operation.

Liquid wastes should never be poured into or disposed of into the separator and that includes any of the following: used oil, antifreeze, solvents, tank bottom water, truck wash water or other water containing detergents. These wastes should either be treated on-site by a provincially approved method or removed by a provincially licensed waste collector.

Inspection and Maintenance

Inspect oil/water separator contents. Measure and record sludge depth and oil layer thickness. Use a calibrated gauge stick to determine water level when the separator is new and filled with water, but before sludge has accumulated in the system. To measure sludge and oil layer thickness during subsequent monitoring, proceed as follows:

- Apply a coating of water detection paste extending to 30 cm (12") below the expected top liquid level mark.
- Insert the stick through the inspection port, keeping the stick vertical and slowly lower the stick into the separator.

  Caution: Do not drop the stick into the separator as to do so could cause a misreading of sludge depth and/or cause damage to the bottom of the vessel.
- Lower the stick until a slight resistance is encountered. This represents the top surface of the sludge layer. Note and record the reading at a convenient reference point (such as the top of the inspection port).
- The difference in the liquid depth measured now and that when the separator was new, is the sludge thickness.
- Withdraw the gauge stick and observe the water detection paste. The distance between the point where the paste has changed colour (the oil/water interface) and the total wetted liquid level is the thickness of the oil layer. If the paste has not changed colour, repeat the measurement using a

new coating of water detection paste, but extend the paste to 60 cm (24") below the expected top liquid level mark.

The manufacturer or designer of the system may specify maximum sludge depth. If not specified, sludge depth should not exceed 15 cm (6 inches). Oil should not exceed 5 cm[1]. Scum and floating debris should not be allowed to accumulate to a depth of more than 5 cm (2 inches).

If the oil or sludge thickness exceeds the specified maximums, the separator should be cleaned. After all contents are removed, the separator should be refilled with clean water, unless the internal baffles are designed such that spilled oil is not allowed to bypass into the outlet when the separator is empty.

For sites that have an oil collection tank that collects skimmed oil from the separator, the depth of oil in the collection tank should be measured. The facility operator should determine, based on records, how quickly this tank fills up. To prevent a system malfunction, have the tank pumped out by a licensed contractor well before the tank is full.

Twice per year (preferably in spring and fall) check the separator's shut-off valves at the outlet and at the inlet, to ensure they operate.

Winter Operation of the Oil/Water Separator

Outdoor separators are subject to freezing and may not therefore, serve their purpose as an oil spill containment system. Abide by the manufacturer's recommendations for winter operation.

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The records should contain:

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- Inspection dates plus the measured thickness of oil and sludge.
- Clean-out dates and copies of waste manifests showing name of waste removal company.
- Spill details including date, time, spill volume, to who was it reported and by whom, clean up information.
- Analytical results of any effluent sampling.

[1] As the design and capacity of oil water separators may vary, the manufacturer's maximum recommended levels may be used as alternative maximum floating oil and grease levels.