S422 BMPs for Railroad Yards

Description of Pollutant Sources:

Pollutant sources can include:

- Drips/leaks of vehicle fluids onto the railroad bed
- Human waste disposal
- Litter
- Locomotive/railcar/equipment cleaning areas
- Fueling areas
- Outside material storage areas
- Erosion and loss of soil particles from the railroad bed
- Maintenance and repair activities at railroad terminals
- Switching and maintenance yards
- Herbicides used for vegetation management

Waste materials can include used oil, solvents, degreasers, antifreeze solutions, chromate and other anti-rust compounds, dyes, radiator flush, acids, brake fluids, soiled rags, oil filters, sulfuric acid and battery sludges, and machine chips with residual machining oil and toxic fluids/solids lost during transit. Potential pollutants include oil and grease, TSS, BOD, organics, pesticides, and metals.

Pollutant Control Approach: Apply good housekeeping and preventive maintenance practices to control leaks and spills of liquids in railroad yard areas.

Applicable Operational and Structural Source Control BMPs:

- Implement the applicable BMPs in this volume depending on the pollutant generating activities/sources at a railroad yard facility.
- Do not allow discharge to outside areas from toilets while a train is in transit. Use pumpout facilities to service these units.
- Use drip pans at hose/pipe connections during liquid transfer and other leak-prone areas.
- When undergoing routine maintenance, discharge locomotive cooling systems only after the locomotive has stopped and at a location where the coolant can be collected, managed, and then disposed of properly.

- During maintenance, do not discard debris or waste liquids along the tracks or in railroad yards.
- Handle wastes generated from large-scale equipment cleaning, such as locomotive, track equipment, or axle cleaning operations, properly to avoid harming the environment and to comply with state and federal environmental regulations.
- Store any metal scrap generated from metal punching or other mechanical operations out of contact with stormwater. For larger metal scrap, see Applicable Treatment BMPs below.
- Do not dump, drain, or allow the discharge of any water-based coolant from multi-punch presses into storm drains.
- Place track mats under each rail/flange lubricator that is in service where track mats can be safely installed and maintained without danger to rolling stock or personnel.
- Select cost-effective rail/flange lubricant that provides safe and effective rail operation while considering adverse environmental impact. Consider both the chemical composition of the lubricant and the likelihood of transfer off of the rail during rain events.
- Inspect and replace track mats, as necessary. Routinely inspect all track mats for tears or saturation, and replace as necessary.

Figure IV-7.3: Installed Railroad Track Mats

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- Install spill containment pans/trays or track mat at designated locomotive and railcar maintenance facilities and fixed fueling areas, to reduce environmental impacts from potential spills under locomotives and other track equipment. Direct spill containment pans/trays to an oil / water separator where feasible for treatment or collect spilled chemicals for proper disposal.
- During locomotive fueling operations use drip pans or secondary containment to capture any fuel or oil seepage.
- Install track mats at designated Engine Tie-Up and/or outdoor locomotive parking locations (e.g., service tracks) located in SWPP permitted areas where locomotives are unattended and idle for extended periods of time.
- Do not conduct heavy/major locomotive engine repairs on the rail line. Conduct heavy/major engine repairs at an established railroad maintenance facility.
- Store creosote-treated railroad ties in locations that reduce the potential to impact stormwater runoff.

DEPARTMENT OF
ECOLOGY
State of Washington

Installed Railroad Track Mats

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Recommended Operational and Structural Source Control BMPs:

At each rail/flange lubricator that is in service use rain sensors to adjust the lubrication cycle accordingly to limit the amount of lubricant exposed to stormwater.

Applicable Treatment BMPs:

In areas subjected to leaks/spills of oils or other chemicals, convey stormwater to appropriate treatment such as a sanitary sewer, if approved by the appropriate sewer authority, or, to BMP T11.10: API (Baffle type) Separator, BMP T11.11: Coalescing Plate (CP) Separator, or other treatment, as approved by the local jurisdiction.

Recommended Treatment BMPs:

Store large metal scrap and materials that cannot be stored in covered areas because of their size, volume, and/or weight (for example rail and tie plates) in locations where stormwater runoff is managed, controlled, and directed to a Runoff Treatment BMP the meets the Enhanced Treatment Performance Goal.