

Environmental Management Practices



Activity: Bulk Storage and Handling ~ Dry

EMP No. O-3

Description:

Prevent emissions of dusts and entrainment of sediments in runoff from dry bulk storage and handling activities.



Targeted Activities:

Dry bulk storage
Dry bulk handling

Development EMPs:

- Cover storage and handling facilities where practicable and necessary
- Install dust suppression mechanisms
- Minimize free fall of materials by installing telescoping arm loaders and conveyers
- Utilize water sprays where practical
- Use vacuum collectors
- Use slurry transport where feasible
- Contain piles with perimeter walls
- Minimize pile heights
- Remove materials from the bottom of piles to minimize dust resuspension
- Use pneumatic or continuous screw conveyors, where possible
 - Cover conveyors
- Provide adequate space for maintenance of equipment
 - Provide separate space for vehicle cleaning and maintenance
- Runoff from cleaning area to sanitary sewer or industrial treatment facility
- Install filtering mechanisms in storm drain system to minimize transport of solids to storm water
 - Consider installing drainage swales, filter berms, drainage inlet protectors such as fabric or gravel, sediment traps, or sediment basins
- Install self-contained truck and railcar wash facilities

Potential Pollutants:

Dust
Sediment
Metals
Hydrocarbons
Salts

Target Environmental Media:

Surface Water
Air
Soil

US Regulatory Requirements & Guidance:

40 CFR 50 -99 Clean Air Act Regulations
40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
40 CFR 122-124 NPDES Regulations for Storm Water Discharges
40 CFR 372 Toxic Chemical Release Reporting: Community Right-to-Know
49 CFR 171-173, 175, and 177 Department of Transportation (DOT) Regulations
State and Local Regulations as

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Operational EMPs:

- Ensure all equipment is in proper working order
- Ensure transport vehicles are covered whenever possible
- Ensure vehicle cleaning occurs away from storm drains.
 - Connect to sanitary sewer or industrial treatment facility if possible.
- Minimize idling of vehicles during transport activities
- Inspect vehicles regularly to minimize spills or leaks
- Conduct regular inspection and maintenance program on equipment and vehicles.
- Clean up spills immediately
- Retrofit storm drain system to include filtering mechanisms
 - Consider installing drainage swabs, filter berms, drainage inlet protection, sediment traps, or sediment basins
- Ensure hatches are covered when material handling is not being conducted
- Conduct routine sweeping of docks and handling areas
- Encourage ships to sweep decks and other areas where dust may be suspended
- Avoid loading/unloading during windy conditions, if possible
- Conduct routine sweeping of truck/rail storage areas and roadway surfaces

Considerations:

- Provide training on handling and transport
- Develop routine inspection and maintenance program and keep records of activities.
- Costs may be very high for installation and maintenance of covered handling areas or dust suppression facilities