

EC-13 DUST CONTROL

Refer to: ITD Standard Specifications, Sections 106, 107, 205, 212, 621, and 711.



BMP Objectives

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

Definition and Purpose

Fugitive dust is primarily produced by traveling vehicles and construction machinery, but may also include blowing wind (see EC-14). This BMP shall be used to prevent or reduce fugitive dust situations, which include protecting the soil surface, roughening the surface, or reducing the wind velocity at the surface. Dust control is a requirement of the NPDES permit as well as other state regulations and local ordinances.

The primary dust control practices include:

- **Temporary surface/soil stabilization** using wood fiber, recycled paper, straw, and mulch in combination with soil binders, tackifier, or bonding fibers. Cover crop seed, soil binders and tackifier alone or combined may also be used to reduce fugitive dust.
- **Temporary vegetation** (seeding) (see Limitations below).
- **Plastic Covers**
- **Gravel or rock mulch cover.**
- **Surface roughening** using disking or tilling implements to build small ridges and valleys perpendicular to the prevailing wind.
- **Barriers** comprised of wood, snow or silt fence or straw bales placed perpendicular to prevailing wind current.
- **Water** is best suited for use on haul, access, or detour roads (see Limitations below).
- **Dust oil, black liquor (lignin), and magnesium chloride solution or other commercially qualified products** (see Limitations below).

Appropriate Applications

- The time and extent of dust control varies greatly and depends on the season, site characteristics, and area within the state. Dust abatement should be a consideration in the initial application.
- Clearing and grading activities create disturbed areas, which may require dust control measures. This includes stockpiles and/or on-site and off-site material source, waste, and storage areas.
- As a standard practice, all exposed areas should be stabilized as required by the NPDES permit. Surface erosion control measures for stormwater can also prevent erosion due to wind.

Limitations

- Water for dust abatement is very effective temporarily but can be costly long-term.
- Barriers, such as fences, may require removal and replacement several times during a construction project and may not be effective.
- Chemicals such as black liquor or magnesium chloride and oils sold for dust control may be detrimental to adjacent vegetation and soils for revegetative purposes and may adversely affect runoff.
- Temporary vegetation (seeding) alone is not practical in arid or semi-arid areas of the state unless establishment water is used. Temporary vegetation should only be considered in combination with other dust abatement measures.
- Chemicals used for dust control may require approval by ITD, EPA, and the Idaho Department of Environmental Quality.
- Commercial products not on ITD's Qualified Products List (QPL) shall be coordinated with and approved by the Product Review Committee.

Design Parameters

- The best method for controlling fugitive dust is to prevent the movement of dust. Measures to accomplish dust control can be:
 - Limiting the amount of bare soil exposed at any one time through sequencing.
 - Locating haul, access, detour roads, and staging areas to minimize exposure.
- When designing the project, consider the most effective method or methods for dust abatement. Refer to other erosion and sediment control BMPs.
- The best method for controlling fugitive dust is to prevent the movement of dust. The Contractor shall assess potential problems and fugitive dust generation at the project site by considering the type of exposed soil, amount and type of equipment used, prevailing wind direction and the effect of other specified erosion and sediment control measures may cause.
- Provide dust control on haul, access, detour roads, and staging areas. Check that chemicals used for dust control are not detrimental to adjacent vegetation. Apply

protective surface measures as soon as possible to minimize wind erosion. Sequence or schedule work to reduce exposed areas subject to wind erosion. Avoid over-application of water for dust abatement.

- Make field adjustments as necessary to provide for effective wind erosion control measures.

Qualified Products List Criteria

See EC-8 (Soil Binders).

Maintenance and Inspection

- Inspections shall be conducted as required by the NPDES permit or contract specifications.
- Dust control requires constant attention and should be done quickly and effectively when conditions require. If control measures are applied, check at regular intervals.
- Accumulated sediment shall be removed from the barrier and disposed in an approved location.
- Chemical applications, if approved, shall be applied at the manufacturer's recommendations and intervals.