

Appendix 3: Fugitive Dust Plan

ENCANA OIL & GAS (U.S.A.) Inc.	Fugitive Dust Control Plan Denver-Julesburg (DJ) Basin Liquids Handling Hub
Wattenberg Unit	
Scope	The scope of these guidelines is to outline some basic principles to minimize and control fugitive dust emissions during land development.
Requirements	Encana places the highest priority on the health and safety of our workforce and protection of our assets and the environment.
Applicable Documents	Department of Public Health and Environment Air Quality Control Commission Regulation 15CCR 1001-3
Quality	These guidelines will be reviewed periodically and will be shared with employees and contractors to ensure that they have adequate knowledge to minimize fugitive dust emissions.

1.0 Introduction

Land development activities, including clearing, excavating, and grading, release fugitive dust, a pollutant regulated by the Air Pollution Control Division (Division) at the Colorado Department of Public Health and Environment. However, small land development activities that are less than 25 contiguous acres and less than 6 months in duration do not need to report air emissions to the Division, but must use appropriate control measures to minimize the release of fugitive dust from the site.

This Fugitive Dust Control Plan addresses how dust will be kept to a minimum at the Encana's Project sites.

This plan focuses action on:

1. Identifying specific individual sources of fugitive dust.
2. Control options for unpaved roadways.
3. Control options for disturbed areas.
4. Control options for transport, storage and handling of bulk materials.
5. Contingency Plan for alternative action in the event that control strategies are not adequate, effective, or practicable.

2.0 Specific Sources

Specific types of fugitive dust sources may appear to have negligible dust emissions, but when combined with other specific sources underway at the same time can create dust plumes that are visible beyond that which is appropriate for designated speeds and designs and may exceed nuisance emission limitation guidelines. It is important to consider all activities on the site together in determining compliance with federal, state, and local air quality regulations.

Task:

Provide field personnel and contractors with the information required to limit fugitive particulate matter (fugitive dust) from all specific sources to include:

- Unpaved Roadways and traffic areas.
- Construction activities including Earth Moving and excavation.
- Bulk Material (i.e. gravel and soils).
- Storage and handling of materials.

3.0 Control Options for Unpaved Roadways

Any owner or operator responsible for construction or maintenance of any (existing or new) unpaved roadway is required to use all available, practical methods to minimize dust emissions:

Task:

Provide guidelines for minimizing fugitive dust emissions from all specific sources on unpaved roadways and traffic areas:

- Require that all passenger vehicles, construction equipment, and truck traffic obey the posted speed limits on all unpaved County roads to and from the project site.
- Ensure that vehicle speeds on new and existing access roads on the project site do not exceed 15 miles per hour by posting speed limits along these roads.
- Restrict vehicle traffic to existing roads by posting signs and/or providing the locations of allowable access routes to all field personnel and visitors.
- Encourage carpooling to and from the project site to limit traffic on existing County roads.
- Roads and well locations will be surfaced with compacted gravel to protect against wind erosion, to reduce the amount of fugitive dust generated by traffic and other activities, and to reduce carryout/trackout.
- Use dust inhibitors (surfacing materials, water, or non-saline dust suppressants) on all unpaved collector, local, and resource roads to prevent fugitive dust problems (ensure that any dust suppressants used are appropriate for road conditions and will not compromise the safety of workers on the project site).
- Restrict vehicular access during periods of inactivity using gates, fencing, and/or onsite security personnel.

4.0 Control Options for Disturbed Areas

Disturbed areas include new roads, well pads, parking and staging areas, and materials storage areas that have been cleared of vegetation, leveled, or excavated. These areas are susceptible to wind erosion and are a major source of fugitive dust emissions that require the appropriate controls and dust mitigation methods. Note that specific sources are subject to change as project conditions change, and will require an evaluation of current control options to ensure effectiveness and practicality.

Task:

Limit the adverse impacts of fugitive dust emissions through control measures and operational procedures designed so that no off-property transport emissions occur at the project site:

- Ensure that land clearing, grading, earthmoving, and excavation activities are suspended when wind speeds exceed a sustained velocity of 20 miles per hour.
- Surface all bare ground with gravel as soon as practicable after clearing, leveling, and grading.
- Use dust inhibitors (surfacing materials, water, or non-saline dust suppressants) on all disturbed areas as necessary to prevent fugitive dust problems.
- Identify the water source to be used for dust suppression, and ensure that contract water haulers are available when needed.
- Reduce the amount of time between initially disturbing the soil and revegetating or other surface stabilization.
- Apply vegetative or synthetic cover to topsoil and spoil piles as soon as practicable following stockpiling to prevent wind erosion and fugitive dust emissions.
- Compact the soil on disturbed areas that will not be surfaced with gravel or revegetated immediately following construction.
- Minimize surface disturbance to only that necessary for safe and efficient construction and operations.
- Use vegetative mulch, reseeding, or other methods of surface stabilization on all areas adjoining development to include shoulders, borrow ditches, and berms if practical.
- Restrict vehicular access during periods of inactivity using gates, fencing, and/or onsite security personnel.
- Identify any new sources of fugitive dust emissions and evaluate and implement the appropriate control methods for that source.
- Incorporate fugitive dust controls in all lands projects.

5.0 Control Options for Transport, Storage and Handling of Bulk Materials

Transporting bulk materials, such as gravel and fill material, can result in off-property dust emissions and other impacts (i.e. broken windshields) over some distance if the appropriate control measures are not implemented. Storage and handling of bulk materials once they arrive at the project site also requires that controls are in place to ensure that these materials do not exceed regulated nuisance dust emissions.

Task:

Use control measures and operational procedures designed so that no off-property transport emissions occur along public roadways to and from the project site:

- Enclose, cover, water, or otherwise treat loaded haul trucks to minimize the loss of material to wind and spillage.
- Require that all contract haul vehicles obey the posted speed limits on all public roadways to and from the project site.
- Ensure that haul truck speeds on new and existing access roads on the project site do not exceed 15 miles per hour by posting speed limits along these roads.
- Restrict haul trucks to existing roads and pad locations.
- Do not attempt to load/unload haul trucks when wind speeds exceed a sustained velocity of 20 miles per hour.
- Promptly remove dust-forming material from haul trucks to minimize entrainment of fugitive particulate matter.

- Avoid storage and handling of bulk material any more than necessary to complete construction.
- Use covers, enclosures, wind breaks, or watering to prevent fugitive dust emissions from material storage piles
- Restrict access to construction areas and storage piles during periods of inactivity using gates, fencing, and/or onsite security personnel.

6.0 Contingency Planning

Alternative control measures may become necessary in the event that the current dust control strategy is not adequate or effective for conditions. An alternative plan may require addition planning, permitting, or other regulatory compliance requirements to implement. In this case, the current activities at the project site would necessarily be suspended until such time as the alternate dust control methods could be put into place.

Task:

Implement alternative action to fugitive dust control plan and to each specific source if deemed necessary to comply with federal, state, and local air quality regulations:

- Provide field personnel and contractors with contact information for responsible individuals in cases where control measures need to be escalated in response to weather conditions (i.e. increased windiness).
- Use an appropriate alternative dust inhibitor if water does not prove to be effective under normal circumstances, and obtain all regulatory permissions for the use of chemical suppressants on the project site.
- Use vegetative blankets or other methods for cover of topsoil, spoil, and bulk material storage piles if immediate cover becomes necessary.
- Attempt to locate alternative sources of bulk material closer to the project site if fugitive dust emissions or other impacts from contract haul trucks on state or federal highways become an issue with public safety or regulatory compliance.

Appendix A

Contacts

ENCANA PERSONNEL

Name	Title	Office	Cell

CONTRACT CONSTRUCTION