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**Federal Air Rules for Indian Reservations**

**Sample Fugitive Particulate Matter Emissions Survey and  
Fugitive Particulate Matter Emissions Prevention Implementation Plan**

The following Sample Fugitive Particulate Matter Emissions Survey and Fugitive Particulate Matter Emissions Prevention Implementation Plan were developed by EPA to assist the regulated community in understanding what form these documents might take. Your facility may be able to comply with the requirements of 40 C.F.R. § 49.126 without adhering to the format of this sample document. The scope and content of your survey should take into account site specific factors as well as the regulatory requirements of 40 C.F.R. § 49.126.

**The information provided in this document is provided for compliance assistance purposes only and it may not address all of the legal requirements applicable to your facility. This document does not replace or amend any statutory or regulatory requirements that may apply to your facility. Following the information in this document will not shield a facility from enforcement. This document does not constitute rulemaking by the EPA and may not be relied on to create a substantive or procedural right or benefit enforceable at law or in equity, by any person.**

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# FUGITIVE PARTICULATE MATTER EMISSIONS SURVEY.

HORIZON GRAVEL COMPANY  
OREGON OPERATION.

2008 ANNUAL SURVEY

Conducted by: Grant Williams, Pit Superintendant.  
James Robertson, Safety Officer.  
Horizon Gravel Company.  
Survey Date: 7/28/08

## FUGITIVE PARTICULATE MATTER EMISSIONS SURVEY.

HORIZON GRAVEL COMPANY  
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## FUGITIVE PARTICULATE MATTER EMISSIONS SURVEY.

### HORIZON GRAVEL COMPANY OREGON OPERATION.

#### **INTRODUCTION.**

Horizon Gravel Company operates a gravel pit approximately one mile north west of the city of Pendleton, Oregon. The facility is located on the Umatilla Reservation and regulated by the Environmental Protection Agency (EPA). The company is subject to the requirements of 40 C.F.R. Part 49 and must conduct an annual survey of its facility to determine the sources of fugitive particulate emissions and develop a plan to minimize those emissions pursuant to 40 C.F.R. § 49.126.

Sand and gravel are mined and processed at this site. In order to mine sand and gravel from the site, pumps are used to dewater the area below 20 feet and then front end loaders and excavators mine the wet aggregate from the bank and transport the pit run material to the feeder and conveyor. The material is transported by conveyor to the gravel plant where it is sorted and sized. Material larger than one and a half inches proceeds to the crushed or dry side of the plant and material smaller than one and a half inches proceeds to the washed side of the plant where it is screened, washed and sized into various rock and sand products. The dry/crushed side of the plant continues to reduce the size of the material by using a series of screens and crushers to make a variety of products. The processed material is stored in stockpiles.

#### **DESCRIPTION OF THE SURVEY AND RESULTS.**

Grant Williams, Pit Superintendant and James Robertson, Safety Officer conducted the fugitive particulate matter survey on Monday July 28, 2008 between 8:00 am and noon. The gravel pit was operating in a normal production mode during the survey and the weather conditions were clear skies and a light breeze with temperatures of 75 to 80 degrees Fahrenheit. These were typical operating and meteorological conditions for the facility conducive to producing fugitive dust.

The survey was conducted by walking around the pit and identifying any sources of fugitive emissions from any of the operating equipment on site.

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### Haul Roads.

The haul roads were observed from the top of the pit where all of the roads could be seen easily. The equipment hauling the wet gravel produced minimum emissions as they were

carrying wet material and the surface of the ground was constantly being wetted down from the water dripping from the vehicles.

The trucks carrying out the processed dry gravel from the pit to customers offsite were traveling on dry haul roads and fugitive emissions were observed from the road surface.

**Precautions:** Ensure that water trucks carry out adequate trips over the dry haul roads to keep the surface wet enough to minimize fugitive particulate matter emissions.

### Wet side conveyors and processing equipment.

The wet side conveyors did not produce any fugitive emissions at the transfer points as the material was wet. As the various processing steps continued through the screens and washing process the material remained wet and caused no emissions. The finished product was transferred by conveyors and stackers to the stockpiles and fugitive dust was observed as the stockpiles dried out.

**Precautions:** Keep gravel stockpiles adequately wet, by using water sprays, to prevent windblown emissions.

### Dry side primary crusher.

The material entering the primary crusher is predominantly wet and no fugitive dust was observed from this process, but the action of the crusher causes heat and the crushed rock leaving the crusher was much drier.

### Dry side tertiary crushers and classifier screens.

Fugitive particulate emissions were observed from this process as the rock had dried out due to the prior crushing and screening. Emissions were observed from both the crushing and screening process.

**Precautions:** Water sprays should be used over the crushing and screening process to limit the emissions of particulate matter.

### Dry side conveyors/stackers to stockpiles.

All transfer points on the conveyors and stackers are fitted with water sprays and no fugitive emissions were observed from this equipment.

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Stockpiles.

The material from the stacker to the stockpile was mostly damp from the water sprays on the conveyor transfer sprays. However due to the heat and slight breeze the stockpile dried out fairly quickly when the stacker moved to another pile. Fugitive emissions were observed from stockpiles that had dried out.

**Precautions:** Water sprays should be used to keep the stockpiles dampened down on a regular basis to minimize fugitive emissions.

**No other sources of fugitive emissions were identified during the annual site survey.**

**HORIZON GRAVEL COMPANY  
OREGON OPERATION.**

**2008 Fugitive Particulate Matter Emissions Prevention Implementation Plan**

**The annual survey conducted on 7/28/08 identified sources of fugitive particulate matter from the facility as follows:**

- a) Haul Roads: The trucks carrying out the processed dry gravel from the pit to customers off site were travelling on dry dusty haul roads and they created fugitive emissions.
- b) Washed product stock piles: Fugitive particulate matter emissions were observed from some stockpiles as they dried out due to weather conditions.
- c) Tertiary crushers and classifier screens: Fugitive particulate matter emissions were observed from both the crushing and screening process.
- d) Aggregate stockpiles: Fugitive particulate matter emissions were observed from the aggregate stock piles that had dried out due to the weather conditions.
- e) The survey also identified the following sources that already employ reasonable precautions to prevent fugitive emissions: The dry side conveyors/stackers have dust suppression water sprays fitted.

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**Procedures that the facility will perform to minimize fugitive particulate emissions.**

- a) **Haul roads:** Water trucks will be scheduled to carry out sufficient trips, over the affected area, during working hours to keep the surface of the road damp enough to ensure that fugitive particulate matter emissions are kept to a minimum.

A supervisor will monitor the haul roads and when necessary call on the water trucks to apply additional water if the scheduled trips are not sufficient to suppress the dust.

A log of the water truck activities will be kept showing the dates, times and quantity of water sprayed on the roads.

- b) **Washed product stockpiles:** Portable water sprays will be made available that can be moved around the stockpiles as required to keep the product damp enough to minimize fugitive particulate matter emissions.

A supervisor will monitor the washed product stockpiles and when any emissions are observed ensure that the sprays are turned on to suppress the emissions. A log of the dates and times that the sprays are turned on will be kept.

- c) **Tertiary Crushers and classifier screens:** Permanent water sprays will be installed over the crushers and classifier screens to ensure that the fugitive particulate emissions are minimized.

A supervisor will monitor this area and if necessary increase the flow of water to ensure the dust is suppressed satisfactorily.

A log will be kept to show the dates and times the sprays are in operation and if they required adjustment to increase the flow.

- d) **Aggregate stockpiles:** Portable water sprays will be made available that can be moved around the stockpiles as required to keep the product damp enough to limit fugitive particulate matter emissions to minimum.

A supervisor will monitor the aggregate stockpiles and when any emissions are observed ensure that the sprays are turned on to suppress the emissions.

A log of the dates and times that the sprays are turned on will be kept.

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- e) **Dry side conveyors/stackers:** The dust suppression water sprays that are fitted will be on during the time that this equipment is running.

A supervisor will monitor the conveyors/stackers to ensure the sprays are on when the equipment is running.

A log of the dates and times the sprays are on will be kept.

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