

	<p>ILLINOIS DEPARTMENT OF NATURAL RESOURCES</p> <p>Office of Oil and Gas Resource Management One Natural Resources Way Springfield, Illinois 62702-1271</p>	
<p>HIGH VOLUME HORIZONTAL HYDRAULIC FRACTURING PERMIT APPLICATION HVHFF-10</p>		

References to "1-xx" or "§1-xx" are to the Hydraulic Fracturing Regulatory Act., 225 ILCS 732/1-1 et seq. References to "240.xxx" and "245.xxx" are to 62 Ill. Admin. Code 240 and 245, respectively.

Attachment: FugitiveDustControlPlan

Please save attachment and use the file name above.

Fugitive Dust Control Plan §1-35(b)(20); 245.210(b)(3), 245.410(c).

Please detail the plan to control fugitive dust emissions from the site. Be sure to include the name and contact information for the responsible person(s) to whom fugitive dust emissions may be reported for immediate control measures to be enacted in case of need.

**WOODROW #1H-310408-193
HYDRAULIC FRACTURING WELL**

STATE OF ILLINOIS
HYDRAULIC FRACTURING PERMIT APPLICATION

**FUGITIVE DUST PREVENTION
AND CONTROL PLAN**

Prepared for Submittal to
Illinois Department of Natural Resources

Prepared by
Shawnee Professional Services



On behalf of
Woolsey Operating Company, LLC



November 8th 2016

WOODROW #1H-310408-193 Fugitive Dust Control Plan

1.0 Introduction

This Fugitive Dust Prevention and Control Plan (FDPCP) was prepared in accordance with the Hydraulic Fracturing Regulatory Act (225 ILCS 732/ 1-75) for controlling fugitive dust particles by request of Woolsey Operating Company (WOC). The purpose of the plan is to reduce short-term impacts to air quality during the mobilization, construction, and demolition activities needed to support the final design, construction, and operation of the Woodrow #1H-310408-193 Hydraulic Fracturing Well Site (Woodrow #1H). The Woodrow #1H Project includes work activities at two locations: the Woodrow #1H Well Site and the #1 Class 2 well operated by TrueFlo Solutions LLC (TrueFlo) at 987 IL Highway One. An alternate disposal site is located at the Rankin #1 well operated by Haggard Well Services near Calvin, IL. This FDPCP is submitted to the Illinois Environmental Protection Agency as Appendix X of the Hydraulic Fracturing Permit Application.

2.0 Definition

Fugitive dust is not emitted from a definable point source, but is emitted from several sources and escapes beyond the property boundary, right-of-way, or easement. In the case of the Woodrow #1H Project, fugitive dust may be emitted from the roadway, material storage piles, and other construction activities, including drilling operations and transportation activities. Other possible sources of fugitive dust and the associated dust control methods are summarized in Attachment E.1, Fugitive Dust Control Plan Matrix. This FDPCP is a tool to help prevent, reduce, control, and manage the production of fugitive dust in the project area during construction and operation. An environmental representative for Woolsey Operating Company will implement this FDPCP. This representative will be a member of the Woolsey Environmental Team listed in Table E.1. The inspection and monitoring requirements within the FDPCP are expected to fall under the responsibilities of the Woolsey Environmental Compliance Inspector (WECI), or designated representative, on fugitive dust control relative to specific work activities. The Woolsey Environmental Team recognizes that periodic review of construction activities and conditions are important to the success of implementing this plan and remaining in compliance with the Hydraulic Fracturing Regulatory Act (225 ILCS 732/ 1-75). It is recognized that fugitive dust can be a nuisance that interferes with the enjoyment of life and property, and can be a safety hazard and harmful to human health or the environment. Procedures to address these issues are provided below.

2.0 Requirements for Dust Control

2.1 SITE INSPECTIONS, ASSESSMENTS, AND RECORDKEEPING: WOC staff will conduct weekly erosion control inspections (or more often as necessary, depending on rainfall) and dust control issues will be included as part of those inspections. Any observation of substantial fugitive dust will be noted as part of the regular inspections and recorded on the Fugitive Dust Control Monitoring Log (Attachment E.2). This log will also be used by the WECl to document other occurrences of fugitive dust witnessed outside of the regular inspections and any occurrences of fugitive dust reported by other construction personnel. In addition, the WECl, or other persons supervising the site, will conduct monthly effectiveness assessments of the project site, including all erosion and fugitive dust control issues.

2.2 PERSONNEL TRAINING: All project employees (including subcontractors) will be trained on the contents of this FDPCP, including potential dust sources and fugitive dust control measures, as summarized in the Fugitive Dust Control Plan Matrix (Attachment E.1). This training will occur at the start of the project. For any new subcontractors or new WOC employees that are hired, training will occur prior to starting work on-site.

2.3 GENERAL RESPONSIBILITIES FOR ON-SITE PERSONNEL: All project personnel have responsibility for fugitive dust control. Any WOC employee or subcontractor who notices fugitive dust will respond as appropriate based on their training. They will implement a defensive strategy by ceasing the activities generating the fugitive dust and immediately notify their supervisor who will respond based on his or her capabilities and who will notify the responsible Site Superintendent. The Site Superintendent will notify the WECl to complete the Self-Inspection Checklist: Fugitive Dust Control Monitoring Log (Attachment E.2), as required, to document the fugitive dust occurrence.

2.4 RESPONSIBILITIES OF THE CONSTRUCTION MANAGER: The designated person responsible for assessing fugitive dust and implementing this FDPCP at the Woodrow #1H well site with WOC. The alternate is the WECl. Incidents involving fugitive dust emissions shall be reported to the WECl.

2.5 GENERAL REQUIREMENTS: WOC is required to provide dust control measures for all areas disturbed by construction. The measures listed below will be required, as necessary, to control fugitive dust. Dust issues located outside of the project limits but identified as originating from the project will be handled similarly. Dust control will be implemented as appropriate by WOC within the project limits, regardless of whether active construction is occurring or not. Dust control is required any time dust is substantially visible in the air. Dust control will be achieved primarily through application of water, and by covering soils, stockpiled materials, and debris. The source of water may be from storm water, fire

hydrants, and/or proposed freshwater wells on the site or near the work area (as permits allow), supplied by a contracted sweeping/cleaning service, or other approved means.

2.6 ON-SITE DUST CONTROL ON UNPAVED ROADS: During mobilization, construction, operation, maintenance, and demobilization of the project, WOC will suppress dust by applying water. WOC will apply water to the active construction work area as needed and if applicable to the work site, without creating unnecessary muddy areas and problems with track-out. WOC will also construct stabilized construction entrances for ingress and egress points, such as County Road 1675 North, to prevent tracking of mud and soil onto paved roads. Use of process waters to control fugitive dust is strictly prohibited.

2.7 DUST CONTROL ON PAVED ROADS: WOC will implement the following requirements on paved roads:

- Construction entrances and exits will be established for all construction-related traffic in order to prevent tracking of mud and soil onto paved roads from the use of unstable ingress or egress points.
- Procedures for removing dirt from wheels and truck exteriors will be used, and will include a wheel wash at the entrance/exit from the site to County Road 1675 North if necessary. Dirt, dust, and debris will be removed from this area on a regular basis to prevent and minimize the transport of soils or dirt off-site.
- Spills of transported material onto public roads will be cleaned up immediately.

2.8 ON-SITE DUST CONTROL ON DISTURBED AREAS: During construction, operation, and maintenance of the project, WOC will suppress dust by applying water. WOC will apply water to active construction work areas, as needed, to control fugitive dust without creating unnecessary muddy areas and problems with track-out. Stabilization best management practices (BMPs; as listed in Attachment E.1) to be used for disturbed areas not supporting construction traffic or active work may also include vegetation, plastic covering, erosion control fabrics and matting, and the early application of a gravel base on areas to be paved. During grading, excavation, and other construction activities, water sprays will be used to keep the soil damp to minimize fugitive dust. Any trucks leaving the site locations with soils or materials that could result in fugitive dust will be covered with a tarpaulin to ensure that there are no emissions during transit. If materials are at any time stockpiled, they may be dampened by water sprays as needed or covered by secured tarpaulins to minimize fugitive dust, if necessary.

2.9 DUST CONTROL DURING DEMOLITION AND DEMOBILIZATION ACTIVITIES: Demolition and demobilization activities for the site locations will be limited to demolition and removal of site infrastructure improvements. Dust control methods during demolition activities include the same methods described above including general dust control methods, methods for disturbed areas, and unpaved roads. Additional BMPs may include the following, if necessary, to meet the general requirements listed above:

- Use of shop vacuums.
- During demolition, water will be used to dampen the area that is being demolished prior to starting the demolition. During the demolition process a water spray will be used to minimize the fugitive dust. The ground will be sprayed with water either by water truck or some type of water spray to minimize fugitive particulate emissions from haul trucks and demolition equipment.
- During the loading of trucks with demolition debris a water spray will be used to minimize fugitive particulate matter emissions. The trucks will have tarpaulins installed to cover their loads prior to leaving the site to ensure that there are no emissions while the trucks are in transit.

2.10 CONTROL OF OTHER AIR EMISSIONS: Other emission-generating activities related to operations and maintenance may include sandblasting or other abrasives, painting, and coating in contained areas shrouded either with plastic or fabric, and general operation of diesel equipment. The following BMPs may be implemented to limit unnecessary generation of air pollutants:

- Appropriate emission-control devices on equipment powered by gasoline or diesel fuel can reduce CO and NOx emissions in vehicular exhaust. Low-sulfur diesel will be used when possible.
- Sandblasting materials will be stored inside a building.
- Non-slag (inert) sandblasting abrasives will be used when feasible.
- Sandblasting will be conducted on days when the wind will not transport the material off-site or in a confined area to limit emissions.
- Spent material will be immediately contained and disposed of at an appropriate facility.
- Lids will be kept on all containers of paints and coatings.
- Methods will be implemented for efficient paint application to reduce over spraying, including proper training for painters.
- When possible, paint types such as waterborne paints, powder coatings, ultraviolet light or electron beam curable coatings, or higher solids paints will be used.
- When possible, cleaners with low hazardous air pollutant and volatile organic compound content such as water-based, alkaline, or microbial cleaners may be used.

**Table E.1
WOC Environmental Compliance Team Duties and Responsibilities**

Team Member	Environmental Compliance Team Duties and Responsibilities
WOC Environmental Manager/ IL District Landman	
Ryan Kelley Phone: [REDACTED]	Coordinates with WECL, Project Director, and Construction/Demolition Manager <ul style="list-style-type: none"> • Has stop-work authority • Oversees job-specific environmental compliance program • Provides environmental compliance training and work plan reviews • Develops permit matrix with WECL • Ensures permit compliance and fulfillment of project environmental commitments. • Specialized Training:
WOC Environmental Manager/ Production Forman Illinois Basin	
Mike Lyke Phone: [REDACTED]	Coordinates with WECL, Project Director, and Construction/Demolition Manager <ul style="list-style-type: none"> • Has stop-work authority • Oversees job-specific environmental compliance program • Provides environmental compliance training and work plan reviews • Develops permit matrix with WECL • Ensures permit compliance and fulfillment of project environmental commitments. • Specialized Training:

**ATTACHMENT E.1
FUGITIVE DUST CONTROL PLAN MATRIX**

Potential Source	Applicable Dust Control Methods	Schedule/Rate of Application	Backup Plan
Temporary construction Haul Road (work site only)	<ul style="list-style-type: none"> • Water haul roads • Control haul routes • Control haul road speeds 	<ul style="list-style-type: none"> • As needed • Follow the Work Plan 	<ul style="list-style-type: none"> • Chemical dust suppressants or surfacing haul roads • Schedule construction trucks
Tracking	<ul style="list-style-type: none"> • Tire wash (drive-through, if needed) 	<ul style="list-style-type: none"> • Wash prior to leaving site 	<ul style="list-style-type: none"> • Wash road with water in compliance with TESCP (i.e. only

	<ul style="list-style-type: none"> Stabilized construction entrances Sweep roads 	<ul style="list-style-type: none"> Place per plan and adjust and maintain as necessary Sweep daily or as needed 	after sediment if removed)
Stockpiles	<ul style="list-style-type: none"> Cover piles Water stockpiles 	<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> Wet stockpiles during active work
Sawing/Grinding	<ul style="list-style-type: none"> Use water assisted saws and grinders 	<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> Use sweeper tuck
Haul Trucks	<ul style="list-style-type: none"> Ensure adequate truck bed freeboard while on haul roads, including local public roads 	<ul style="list-style-type: none"> Always 	<ul style="list-style-type: none"> Cover loads on scheduled construction trucks
Grading Activities	<ul style="list-style-type: none"> Pre-wet soils before excavating Avoid activity during high winds Minimize time frames between operations Minimize areas of clearing and grubbing to manageable sizes 	<ul style="list-style-type: none"> As needed As weather dictates 	<ul style="list-style-type: none"> Post-wetting
Rain/Wind	<ul style="list-style-type: none"> Keep cleared areas covered for major rain/wind events During dry weather, spray exposed soil with water 	<ul style="list-style-type: none"> Prevent the mud-to-dust scenario 	<ul style="list-style-type: none"> Use sweeper truck
Exposed Soils	<ul style="list-style-type: none"> Apply BMPs such as: plastic covering, erosion control fabrics and matting, and the early application of a gravel base on areas to be paved 	<ul style="list-style-type: none"> For all areas not being worked and that contain erodible soils 	<ul style="list-style-type: none"> N/A

ATTACHMENT E.2
SELF-INSPECTION CHECKLIST: FUGITIVE DUST CONTROL MONITORING LOG

Date/Time	Location	Fugitive Dust Source	Control Method	Comments

*May be copied as needed