

**TECHNICAL SUPPORT DOCUMENT  
NOTICE OF CONSTRUCTION PRELIMINARY DETERMINATION  
EASTERDAY FEEDLOT  
MESA, WASHINGTON  
June 2014**

**2014 Amendments to Easterday North Feedlot Approval**

On September 20, 2013, Easterday Ranches, Inc. submitted an NOC application to incorporate a manure management plan into the North Feedlot approval order. The September application was found to be incomplete, lacking some required emission information and containing inaccuracies in some spots. On March 25, 2014, a more complete version of the application was submitted and used to revise the facility approval order which is now being made available for public comment. Emission estimates for feedlots are very uncertain, relying on assumptions about the effectiveness of best management practices as well as assumptions about the underlying emission rates. Ecology has determined that the BMPs utilized by Easterday over the past year at the North Feedlot as well as intangibles such as weather, complainant fatigue, and others as yet to be identified, have resulted in a reduction in feedlot odor complaints. It is possible that more aggressive implementation of BMPs has achieved an acceptable level of odors from this feedlot. It also seems that the addition of the enzyme 'Biowish' to lagoons and, less frequently, to the entire manure pad may result in substantial odor reductions.

Specific measures of BMPs (e.g. inches depth of pen manure, or a range of percent moisture) have been removed from permit conditions and, instead, required to be incorporated in the facility Operations and Maintenance Manual (O&M Manual). It is expected this will allow Easterday to better manage the BMP parameters as they change seasonally and even weekly or daily. Easterday is required to review the O&M Manual at least annually and revise it as necessary to address system performance.

On a site visit Ecology made to the feedlot in April of 2014, two emergency generators were discovered that had not been described in previous application documents. The engines on these units (for power in the event of line power failure to the water system or the feedmill) do not appear to satisfy new source performance standards for engines in this service. Consequently, Ecology has inserted a compliance schedule as Condition 2 of this preliminary determination. Another modification of this approval will probably be necessary to incorporate conditions of approval for compliant engines as well as any requirements of the new source performance standards for these engines not contained in this approval. This approval is issued to address an improved manure management plan (more aggressive implementation of BMPs). Emissions have not changed demonstrably with more aggressive implementation of BMPs, so previous technical support documents remain accurate and are appended as follows:

**1. EXECUTIVE SUMMARY**

The Washington State Department of Ecology (Ecology) has determined that the applicant, Easterday Feedlot, has satisfied all of the requirements of New Source Review for its December 2012 proposed hay milling operation at its feedlot near Mesa, WA. Hay milling

for feed was not part of the feedlot project evaluated for the 2011 facility permit, although the hay milling (without air pollution control or required Ecology approval) has been conducted from feedlot start-up until the present. The proposed operation (this project) will enclose the hay milling and vent emissions through a fabric filter. Ecology now finds that this project will have no significant adverse impact on air quality. The following outlines Ecology's technical analysis of this proposed project.

## 2. INTRODUCTION

### 2.1. The Project

On October 8, 2008, Easterday Feedlots, Inc. proposed to develop a new 30,000 head feedlot operation on a 960 acre property near Mesa, WA. The proposal included construction and operation of a feed milling and storage facility, buildings for shops, offices, animal medical care, and a horse barn, a runoff lagoon, a freshwater pond, and 115 acres of animal pens. The original project description did not include hay milling although that activity has been conducted, without enclosures or pollution control, since start-up of the feedlot. In 2012, an Ecology inspection discovered the unpermitted hay processing activity and other problems. Ecology cited Easterday for this and a number of other deficiencies, and issued an administrative order requiring correction. This permit modification addresses only the hay milling activity at the feedlot facility.

- 2.1.1.1. The Easterday facility is proposed at a location approximately 9 miles southeast of Mesa, WA. The legal description of this location is the South ½ of the Section 13, Township 12, Range 31 East, Willamette Meridian and the entire adjoining Section 24. This is a 960 acre parcel bounded on the north by Owsley Road, the east by Gertler Road, and the south by Overturf Road. The west boundary of the property is the west boundary of sections 24 and 13.
- 2.1.1.2. The current project involves constructing a bale shredder enclosed in a cabinet, an enclosed conveyor from the shredder discharge to the proposed processed hay storage building, and two stationary feed mixers to be installed inside the processed hay storage building, with truck load-out conveyors and spouts. The net effect of this project is to enclose the hay processing activities (currently conducted without enclosure or pollution controls) and to draw air from the bale shredder and hay building through a fabric filter for control.
- 2.1.1.3. During operation of the proposed facility, there will be dust emissions from the shredder in-feed area, from the fabric filter exhaust, and from the load-out spouts. These will be minimized if enclosed and vented through a fabric filter as described in this proposal.
- 2.1.1.4. This is a facility activity not mentioned in the original NOC application. As such, a Notice Of Violation (NOV) was issued to Easterday Ranches for operation of a significant dust source without Ecology approval. Easterday was also issued an administrative order requiring correction of the operation of this source (the bale shredder) without approval and without pollution controls.

Correction of other compliance issues at this facility is deferred to future permit modifications.

### 3. Applicable Regulations

3.1. WAC 173-400-113, Requirements for new sources in attainment or unclassifiable areas, is the State regulation that defines the evaluations of the Easterday feedlot project(s). The subsections of WAC 173-400-113 require the following:

3.1.1. WAC 173-400-113(1): “The proposed new source will comply with all applicable new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAP)...”.

3.1.1.1. Ecology is not aware of any NSPS or NESHAP that apply to this Easterday project.

3.1.2. WAC 173-400-113(2): “The proposed new source or modification will employ BACT for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification”. Easterday is required to employ BACT in the terms and conditions of the Approval Order associated with this Technical Support Document. A Presumptive BACT level for the hay processing fabric filter is as follows:

3.1.2.1. Exhaust Streams with dry aerosols: Fabric filtration to reduce the exhaust concentration to 0.005 gr/dscf or less.

3.1.3. Specific BACT

3.1.3.1. PM:

3.1.3.1.1. Grain milling PM will be controlled by enclosing hay transfer conveyors, and using a bin vent fabric filter to control emissions from hay shredding, storage, mixing, and loadout.

3.1.4. WAC 173-400-113(3): “Allowable emissions from the proposed new source or modification will not delay the attainment date for an area not in attainment, nor cause or contribute to a violation of any air quality standard.” Emissions from the hay milling project following construction of the new enclosed and controlled system will be much lower than they have been since start-up of this feedlot. They have not been modeled, but are also not expected to contribute to ambient air quality issues.

3.1.5. WAC 173-400-113(5): “If the proposed new source or the proposed modification will emit any toxic air pollutants regulated under chapter 173-460 WAC, the source meets all applicable requirements of that program.” Easterday’s hay milling proposal will emit no toxic air pollutants to Ecology’s knowledge.

3.2. WAC 173-460, Controls for New Sources of Toxic Air Pollutants, is the State regulation that addresses the risk to the public from routine releases of toxic air contaminants from new and modified sources.

3.2.1. WAC 173-460-050: The applicant must quantify the facility’s emissions of toxic air contaminants. Easterday has quantified no toxics for the hay milling proposal. Ecology is unaware of toxics that would be emitted by the project.

- 3.2.2. WAC 173-460-060: The applicant must install and operate t-BACT on each emission point for which there is an increase in a toxic air pollutant. Ecology is unaware of toxics that would be emitted by the project.
- 3.2.3. WAC 173-460-070: This section of the regulation requires that impacts of emissions of toxic air pollutants be demonstrated to be sufficiently low to protect human health and safety. Ecology is unaware of toxics that would be emitted by the project.

#### 4. The NOC Application:

The hay milling NOC application was received on December 3, 2012. The application was determined to be complete on January 2, 2012.

#### 5. Determinations of Best Available Control Technology (BACT) and Best Available Control Technology for Toxics (t-BACT)

- 5.1. The emission points determined to emit significant quantities of criteria or toxic air pollutants are the bale shredder for PM, and emissions from the proposed conveyors, hay storage building, and load-out spouts. Fabric filter controls of the shredder cabinet, the enclosed conveyors, and the hay storage building with load-out spout drop tube enclosures are measures considered BACT for this project. Visible emission limitations will be incorporated into the approval for each of these potential points of emissions to implement this determination. The fabric filter will be limited to 0.005 grains/dscf although stack testing is not required by the approval, due to vendor-stated concentrations of 0.001 gr/dscf.

#### 6. Ambient Air Quality Analysis

##### 6.1. Modeling Methodology

Easterday was not required to perform modeling for this project.

##### 6.2. NAAQS Analysis

The project as proposed and as limited by the conditional approval, will emit very small quantities of particulate matter. The project, then, will comply with the NAAQS and State Ambient Air Quality Standards.

##### 6.3. WAC 173-460, Toxic Air Pollutant Modeling Results

Easterday was not required to perform modeling for this project.

#### 7. Conclusion

On the basis of the above evaluation and the NOC application submitted December 3, 2012, Ecology has determined that the hay milling project at Easterday Ranches' North Lot Feedlot will satisfy the requirements of the Washington Clean Air Act. If constructed and operated in accordance with the NOC application, and with the terms and conditions of the approval order, this project may be approved.