



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101
23 AUG 2007

W. Clark Smith
Permitting Section Supervisor
Air Quality Division
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, NE 68509-8922

RE: Aventine Renewable Energy-Aurora West, LLC, Aurora, Nebraska
Draft PSD construction permit comments

Dear Mr. Smith:

On July 17, 2007, EPA Region 7 received notification of the Nebraska Department of Environmental Quality's (NDEQ) intent to approve the Prevention of Significant Deterioration (PSD) construction permit for Aventine Renewable Energy-Aurora West, LLC (Aventine) to construct a new 227 MMgal/yr fuel grade ethanol production facility. We appreciate the opportunity to review the draft permit and provide the following comments.

- 1) The project includes the installation of eight natural gas fired boilers with low NOx burners. Each boiler has a maximum heat input capacity of 92.4 MMBtu/hr and the permit sets a BACT limit of 0.04 lb NOx/MMBtu for each boiler. In Specific Condition II.(D), the draft permit establishes a one time stack test, but leaves open the option not to require testing. We suggest that page G-1 of the permit state that initial performance testing shall be conducted in accordance with Specific Condition II.(D), and delete the phrase "if required." Because compliance with the PSD permit must be able to be determined on an on-going basis, independent of the Title V permitting process, we suggest that NDEQ consider requiring continuous emissions monitoring systems (CEMS) for the boilers to monitor emissions of NOx and CO. As an alternative, a predictive emissions monitoring system (PEMS) could be used to demonstrate compliance with the emissions limits.
- 2) The MACT standards for Part 63, Subpart DDDDD was recently vacated. The boilers would have been subject to that Subpart, but now, 112(g) applies if the source meets the applicability thresholds in the statute and in 40 CFR Part 63.40. Page 42 of the fact sheet should be corrected with appropriate discussion regarding the vacatur of the MACT Subpart DDDDD. Likewise, the permit on Page G-1 under III.(G) Specific Conditions for Gas-Fired Boilers should to be corrected to reflect the 112(g) requirements.

3) The permit sets a VOC BACT limit for the fermentation process scrubbers at 99% control efficiency or 150 ppmvd as carbon. We suggest that the permitting record discuss the back-stop limit of 150 ppmvd as carbon and explain why that limit is appropriate. The permitting record would benefit from an explanation of a range of options. Likewise, the permitting record does not discuss the HAP reduction or how the limit was established. Further, the PSD construction permit should require initial performance testing, establish annual monitoring requirements and not rely upon the operating permit to establish compliance testing.


4) The PSD program requires that no permit may be issued if projected impacts from the project cause either an exceedance of a National Ambient Air Quality Standard (NAAQS) or a PSD increment. In this case, modeling conducted by the applicant and presented in the application indicate that the project exceeds both NAAQS and increment when haul roads are considered. Based on EPA's review, we concur that the project as modeled, shows that NAAQS and increment may not be met. NDEQ states in the fact sheet, Page 27, Section 2.1, last sentence that "... PM₁₀ emissions from haul roads were not included in the modeling analysis ..." We recommend that NDEQ further evaluate the data, with inclusion of haul roads utilizing the BMPs proposed, to ensure that NAAQS and increment are not violated.

To the extent that "best management practices" on haul roads can be shown to eliminate any adverse NAAQS and increment impacts, such practices should be reflected in the permit as enforceable requirements. Currently, the only practice required by the draft permit in Specific Condition III.(K) is to perform street sweeping once a week as weather events warrant. The draft permit also requires the source to develop, maintain and implement a "Truck Traffic Fugitive Control Strategy and Monitoring Plan", but with no opportunity for public input, no oversight or approval by the NDEQ, nor inclusion in the permit of rigorous best management practices, the contents of any such plan are arguably unenforceable.

Therefore, we suggest that NDEQ include a comprehensive set of best management practices (BMPs) in the permit. The recent permit issued to Homeland Energy Solutions, LLC, located in Lawler, Iowa, provides a list of rigorous BMPs including: paved haul roads; immediate clean-up of spills; daily water flushing and sweeping; quarterly silt load performance testing to begin within 60 days of receiving grain; record the weight, truck type, and number of trucks that load/unload each material on a daily basis; calculate number of total vehicle miles traveled (VMT) daily; and limit the number of vehicle miles per 365 day rolling total. A copy of that Haul Road permit is enclosed. In the future, we would like to work with NDEQ to conduct a monitoring study to determine the effectiveness of BMPs and perhaps Aventine would be a good candidate for such an evaluation.

As always, we appreciate the opportunity to provide what we hope you will find to be constructive comments. Please contact Patricia Scott at (913) 551-7312 if you have any questions or comments regarding this letter.

Sincerely,


for

JoAnn M. Heiman
Branch Chief
Air Permitting and Compliance Branch
Air and Waste Management Division

Enclosures: EPA's response to NDEQ's Haul Road Policy
Homeland Energy Solutions, LLC final PSD haul road permit
Memorandum prepared by Richard L. Daye



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VII
901 NORTH 5th STREET
KANSAS CITY, KANSAS 66101

August 21, 2007

MEMORANDUM

SUBJECT: Aventine Renewable Energy, Aurora, Nebraska – PSD Permit

FROM: Richard L. Daye
Regional Meteorologist
ARTD/APDB

TO: Pat Scott
Environmental Protection Specialist
ARTD/APCO

My review of the modeling for the Aventine Renewable Energy, Inc. (Aventine) PSD application indicates that the PM10 National Ambient Air Quality Standards (NAAQS) and increment standards will be violated. **The highest 2nd highest 24-hour predicted PM10 concentration from the Aventine facility when the haul roads were included was about 216 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) without a background value of $60 \mu\text{g}/\text{m}^3$ (Figure 3). When the background is added, the predicted concentration becomes about $276 \mu\text{g}/\text{m}^3$.** This concentration occurred on the Burlington-Northern Railroad (ambient air) that passes through the facility. However, predicted PM10 concentrations greater than the NAAQS 24-hour standard of $150 \mu\text{g}/\text{m}^3$ and the 24-hour increment standard of $30 \mu\text{g}/\text{m}^3$ extend beyond the facility's fence line. Figures 1-8 show the concentrations for the different scenarios that I modeled. Table 1 Predicted PM10 CONCENTRATIONS summarizes the modeling. The haul roads are the major contributors to the predicted violations caused by the Aventine sources. There are other areas where predicted violations occur, e.g., near the Overland Redi-Mix facility northeast of the Aventine facility. The reported sulfur dioxide, nitrogen dioxide, and carbon monoxide concentrations are well below the standards and should not be a concern. I did not model these pollutants.

I used the PM10 input data that Sara Speser sent me. The data were contained in the *Aventine DEPT RUN Modeling folder*. The files included those in the *NAAQS (24-HOUR) lb-hr* folder. Scenarios with and without haul roads were modeled using the latest version of AERMOD (07026).

The analyses were limited to the sources in the area close to the Aventine facility (Figure 9). The Nebraska Energy (NE) facility was included as part of the Aventine facility. The emissions sources used in the NAAQS analyses were also used in the increment analyses instead of the unrealistic large volume sources (NE and Redi-Mix) in the included increment files.

Apparently the AERMET analyses of the meteorological data from the National Weather Service Station at Grand Island, Nebraska, used an anemometer height of 10 meters instead of the reported height of 20 feet (6.91 m) in the *2006 Local Climatological Data Annual Summary* for Grand Island (see attached LCD, page 8). The effects of this on the predicted concentrations are unknown. The AERMET analyses should be

redone.

The only fence lines included in the analyses are for the Aventine and NE facilities. From the data submitted it is not possible to determine Aventine's impact on other facilities. Therefore, all receptors should be considered to represent ambient air. The fence line data file included in the folder for the Aurora Fertilizer plant is not valid. The coordinates place the fence line south of the plant sources. Predictions for all fence lines should be done as well as within fenced areas. This is necessary to determine the concentrations on other companies' fenced areas. The other companies' predicted concentrations may be discarded in their non-ambient fenced areas but the applicant's concentrations must be considered for NAAQS and increment purposes.

The source characteristics for the volume sources should be investigated. The size of many volume sources is too large and not realistic. The volume sources representing the Aventine's haul roads were each about 120 feet wide. (Also, it seems as the roads are represented by parallel volumes which means that the road is more than 200 feet wide). The initial lateral dimension is 8.53 meters giving a length of side as 36.68 meters, or about 120 feet, when multiplied by 4.3. $S_y = \text{side length} / 4.3$ is the recommended formula to use for a single volume source. This is the formula that was used in the modeling. However, when used to represent a line source such as a haul road, or a series of vents, the formula is $S_y = \text{side length} / 2.15$. If a line source is represented by separated volume sources, the 2.15 should be used by the emissions should be doubled because each volume source is representing two adjacent sources. Predicted concentrations are usually greater when a large volume source is broken into smaller sources.

I did not check the emissions modeled with those to be permitted nor did I have time to do sensitivity analyses on changing source characteristics.

Please call me at 7619 if you have any questions on my report.

SUMMARY: Violations of the PM10 NAAQS and increments are predicted. Additional modeling should be done but before any additional modeling is done, it is necessary to reanalyze the meteorological data, to review and/or change source characteristics for many of the sources, and to verify that the emission limits and/or limited operations in the permit are the same as those modeled.

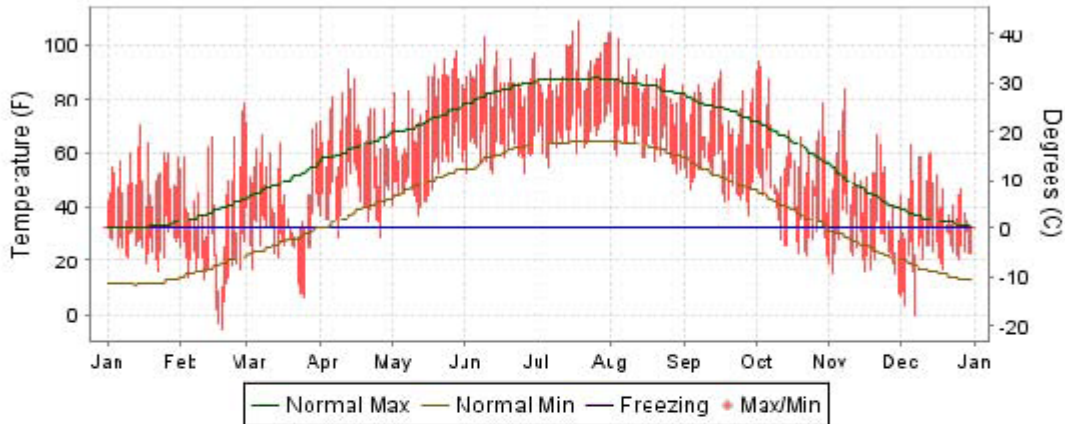


2006
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

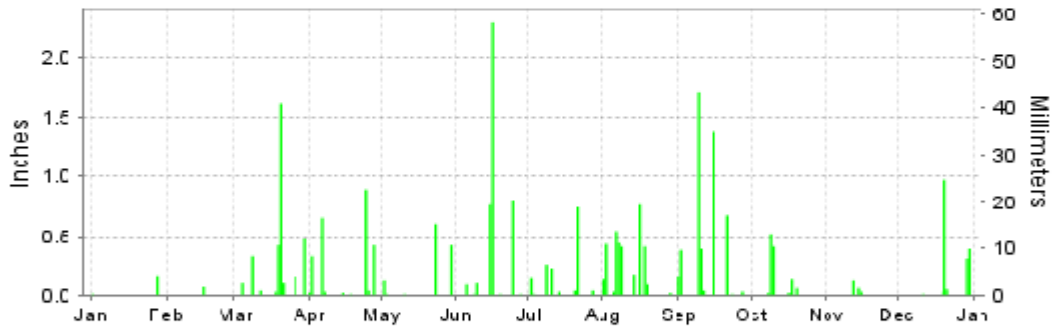
ISSN 0198-3105

**GRAND ISLAND,
 NEBRASKA (KGRI)**

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
 AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

NATIONAL
 OCEANIC AND
 ATMOSPHERIC ADMINISTRATION

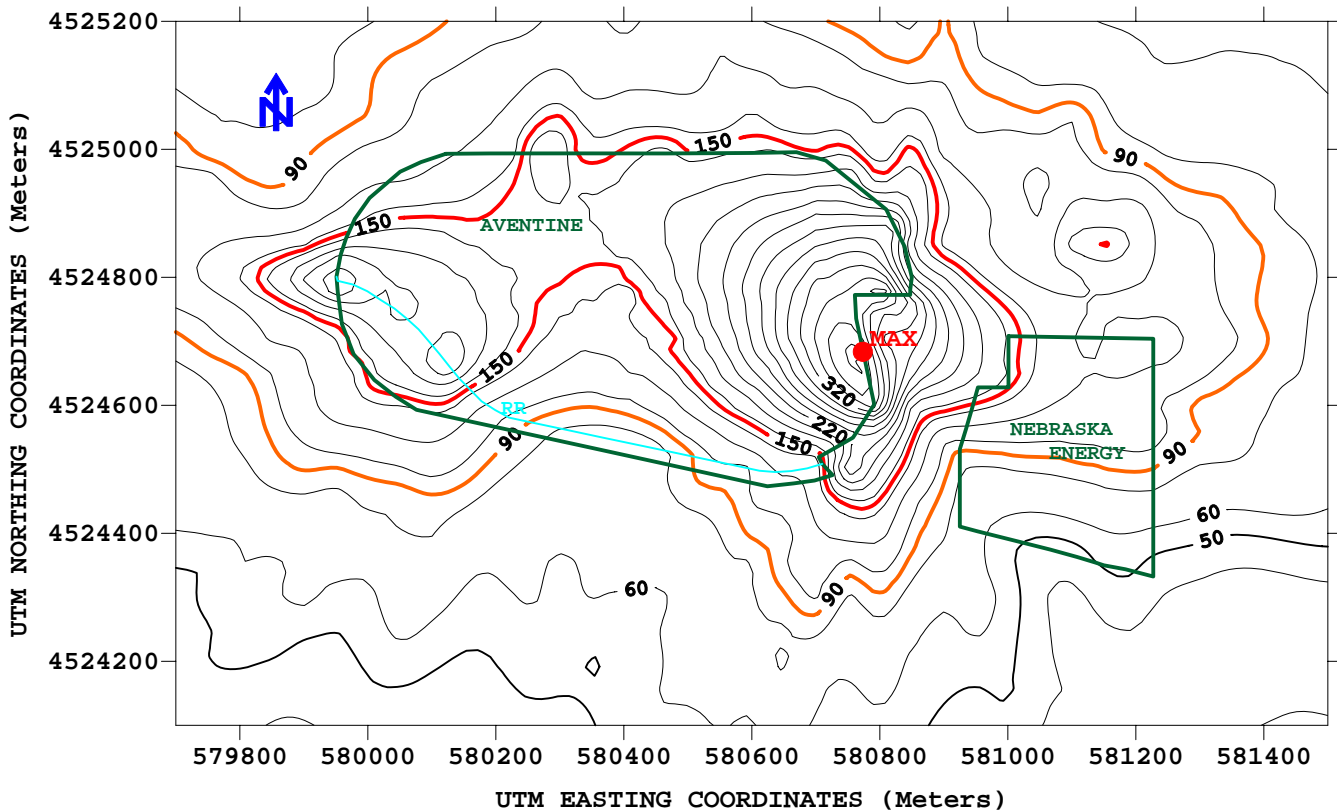
NATIONAL
 ENVIRONMENTAL SATELLITE DATA
 AND INFORMATION SERVICE

NATIONAL
 CLIMATIC DATA CENTER
 ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

PREDICTED PM10 CONCENTRATIONS (Micrograms/Cubic Meter)				EPA MODELING	
AURORA, NEBRASKA AREA		AVENTINE RENEWABLE ENERGY		PSD APPLICATION	
SCENARIO	PERIOD	CONCENTRATION	UTM EASTING	UTM NORTHING	DATE
1 ALL SOURCES WITH ROADS	24-HOUR H2H	388.10144	580772.38	4524691	19-Jan
	WITH BG	448.10144			2004
	ANNUAL	141.53038	580800	4524650	2003
	WITH BG	166.53038			
2 ALL SOURCES WITHOUT ROADS	24-HOUR H2H	119.6861	581100	4524850	26-Jan
	WITH BG	179.6861			2000
	ANNUAL	32.75709	581100	4524850	2004
	WITH BG	57.7509			
3 AVENTINE SOURCES WITH ROADS	24-HOUR H2H	216.53957	580127.31	4524661	31-Dec
	WITH BG	276.53957			2000
	ANNUAL	46.4844	580041.5	4524751.5	2004
	WITH BG	71.4844			
4 AVENTINE SOURCES WITHOUT ROADS WITHOUT NE ENERGY	24-HOUR H2H	26.6914	580620.13	4524995.5	17-Oct
	WITH BG	86.6914			2003
	ANNUAL	6.64548	580620.13	4524995.5	2001
	WITH BG	31.64548			
PREDICTED NAAQS VIOLATIONS					
ALL 24 CONCENTRATIONS ARE THE HIGHEST 2ND HIGHEST					
BG = NDEQ BACKGROUND VALUES					
ALL MODELED SOURCES ARE WITHIN 1 KILOMETER OF THE AVENTINE FACILITY					
AVENTINE SOURCES INCLUDE NEBRASKA ENERGY SOURCES EXCEPT FOR SCENARIO #4					
ALL EMISSIONS ARE NAAQS 24-HOUR EMISSIONS					
STANDARDS:	NAAQS 24-HOUR = 150 MICROGRAMS PER CUBIC METER				
	NAAQS ANNUAL = 50 MICROGRAMS PER CUBIC METER				
	24-HOUR INCREMENT = 30 MICROGRAMS PER CUBIC METER				
	ANNUAL INCREMENT = 17 MICROGRAMS PER CUBIC METER				
NDEQ BACKGROUND:	24-HOUR = 60 MICROGRAMS PER CUBIC METER				
	ANNUAL = 25 MICROGRAMS PER CUBIC METER				
TABLE 1 PREDICTED PM10 CONCENTRATIONS					

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 ALL SOURCES INCLUDING ROADS
 NO BACKGROUND
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

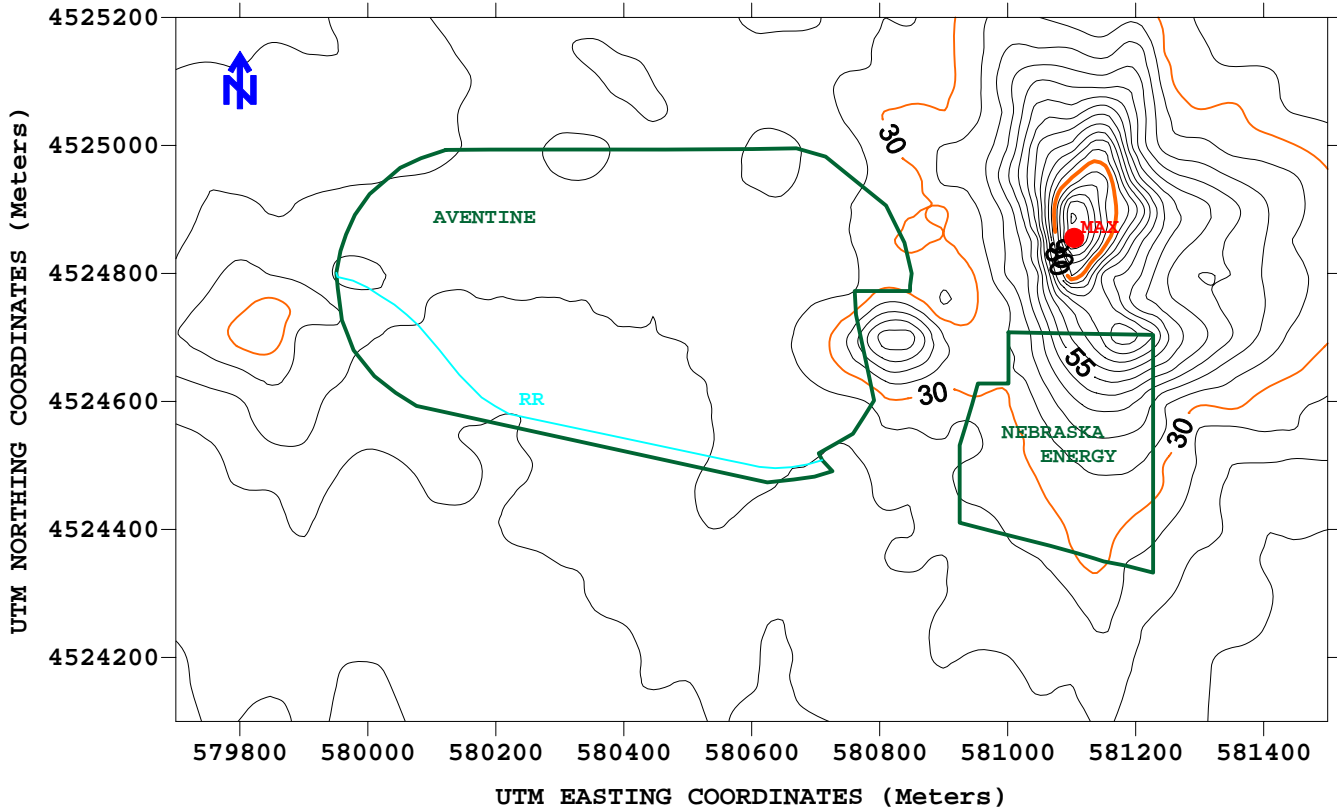
FENCE LINE

**FIGURE 1 ALL SOURCES WITH HAUL ROADS
 NO BACKGROUND**

NO BACKGROUND (60 UG/M³)

MAXIMUM CONCENTRATION: ●
 388.10 ug/Mm³ @ 580772.38 E 4524 691.00 N
 ON JANUARY 19, 2004

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 ALL SOURCES NO ROADS NO BACKGROUND
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

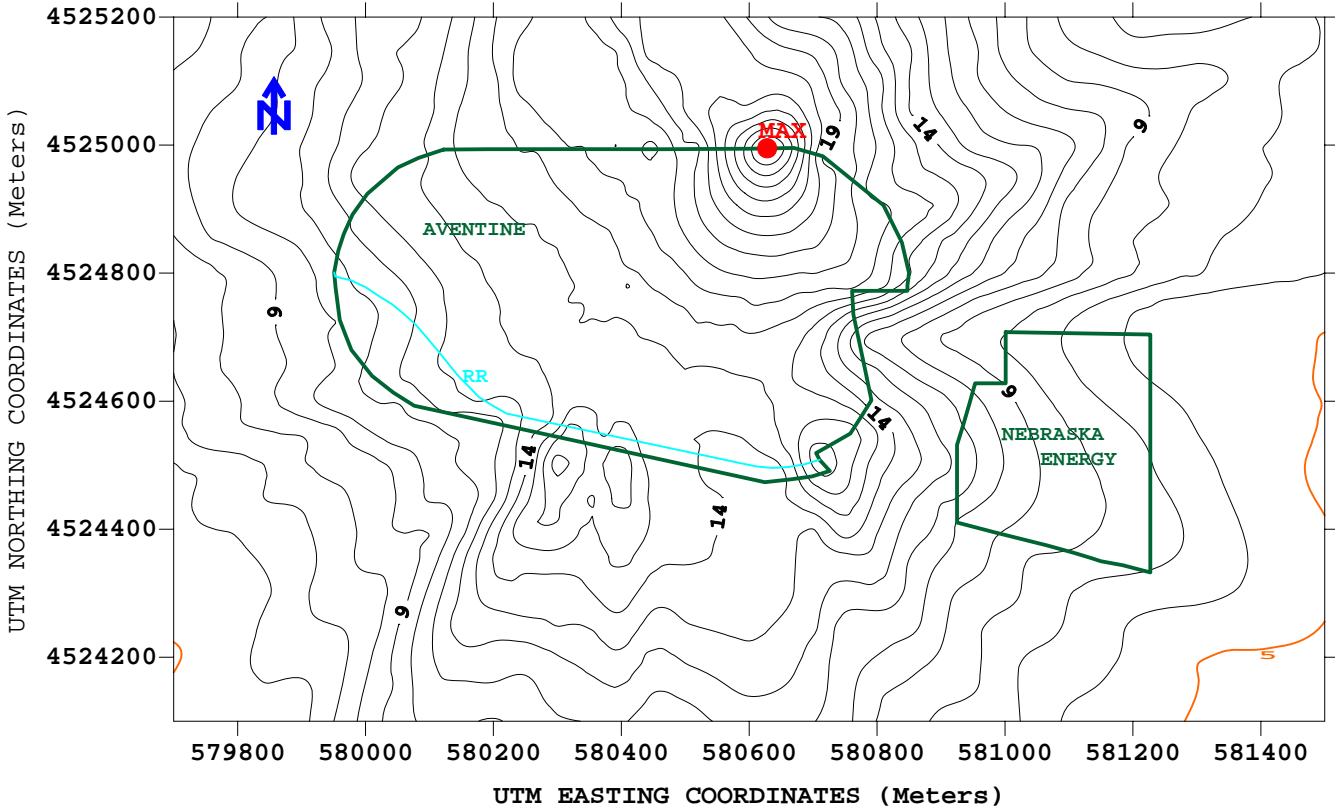
FENCE LINE

**FIGURE 2 ALL SOURCES WITHOUT HAUL ROADS
 NO BACKGROUND**

NO BACKGROUND (60 UG/M³)

MAXIMUM CONCENTRATION: ●
 119.69 ug/Mm³ @ 581100.00 E 4524850.00 N
 ON JANUARY 26, 2000

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 AVENTINE SOURCES (NO NEBRASKA ENERGY)
 NO ROADS OR BACKGROUND INCLUDED
 (MICROGRAMS PER CUBIC METER)**



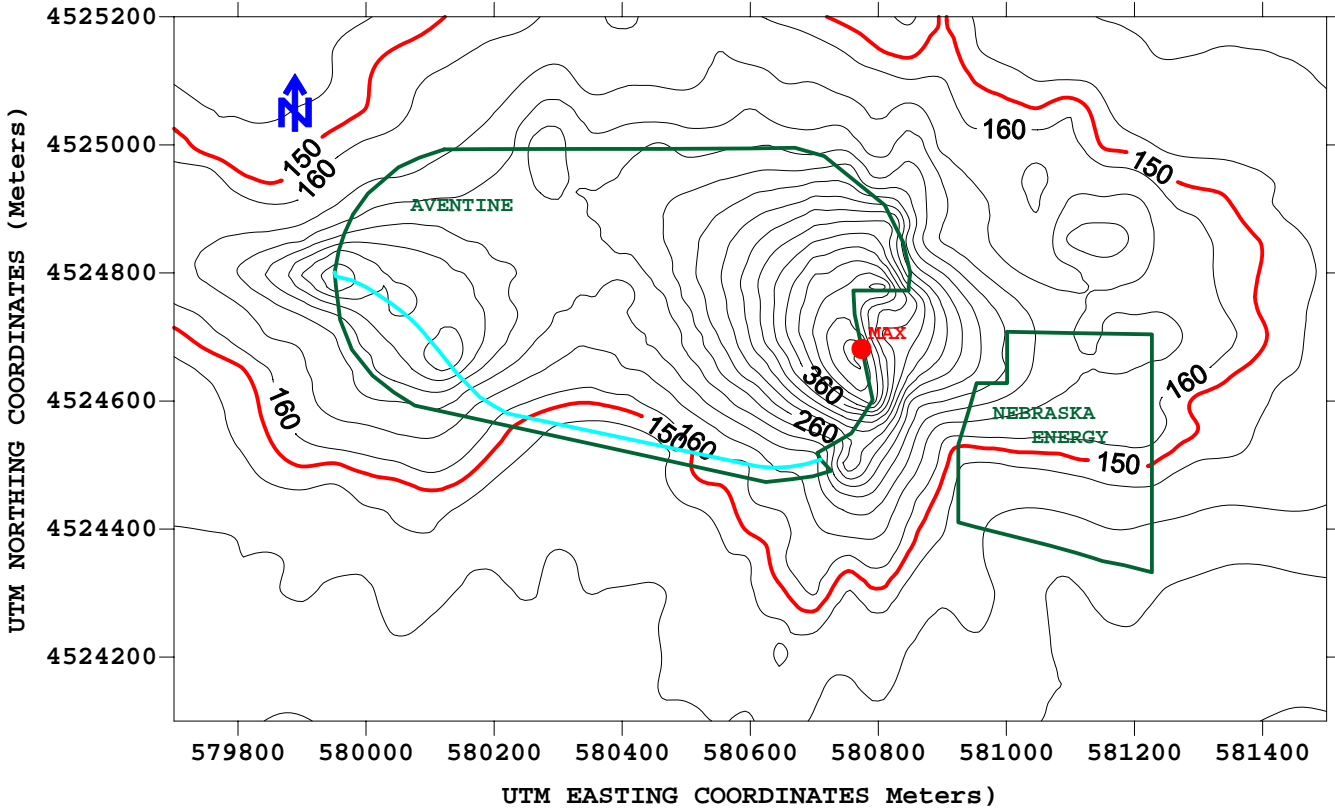
AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

FENCE LINE

FIGURE 4 AVENTINE SOURCES NO NEBRASKA ENERGY SOURCES
 NO ROADS NO BACKGROUND

MAXIMUM CONCENTRATION: ●
 26.69 ug/m³ @ 580620 E 4524995.5 N
 ON OCTOBER 17, 2003

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 ALL SOURCES INCLUDING ROADS AND BACKGROUND
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

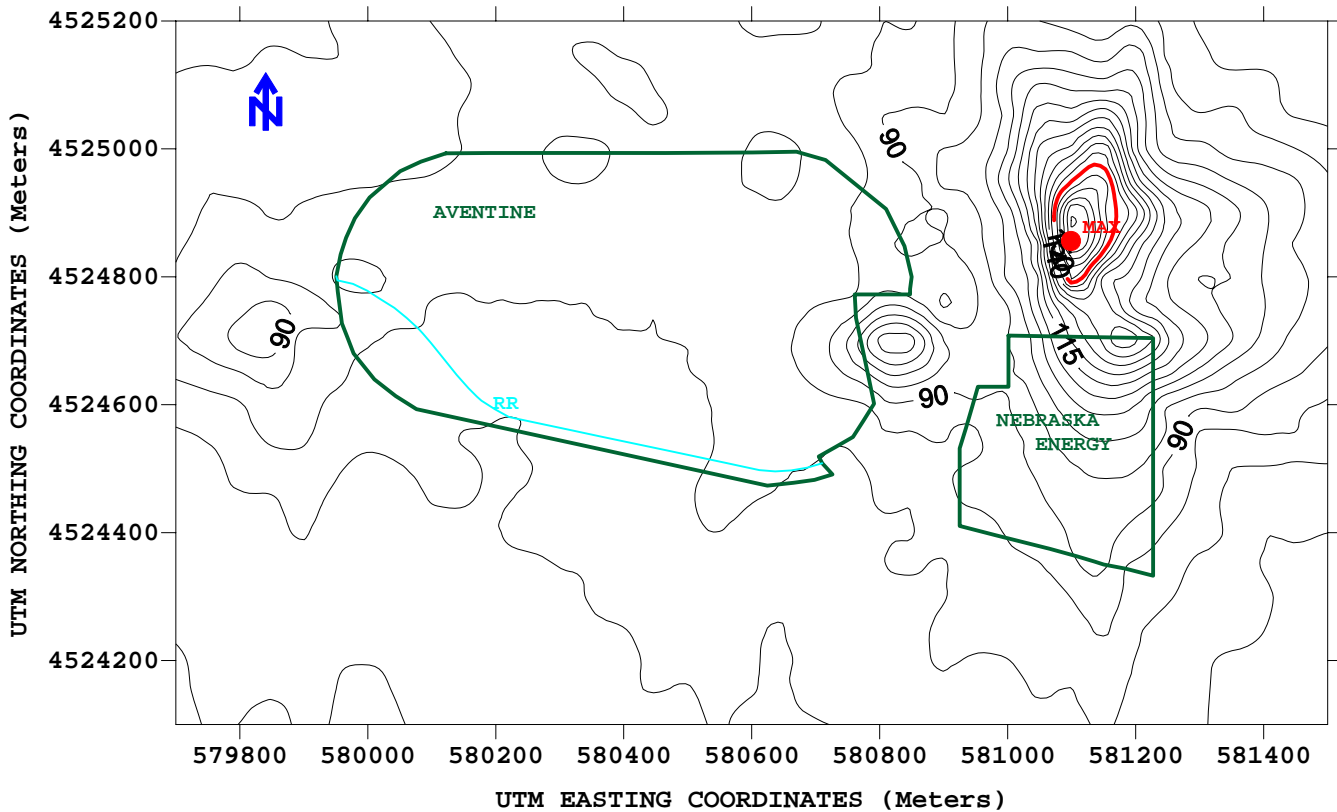
FENCE LINE

FIGURE 5 ALL SOURCES WITH HAUL ROADS
 AND BACKGROUND

BACKGROUND (60 UG/M³)

MAXIMUM CONCENTRATION: ●
 448.10 ug/M³ @ 580772.38 E 4524 691.00 N
 ON JANUARY 19, 2004

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 ALL SOURCES INCLUDING BACKGROUND NO ROADS
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

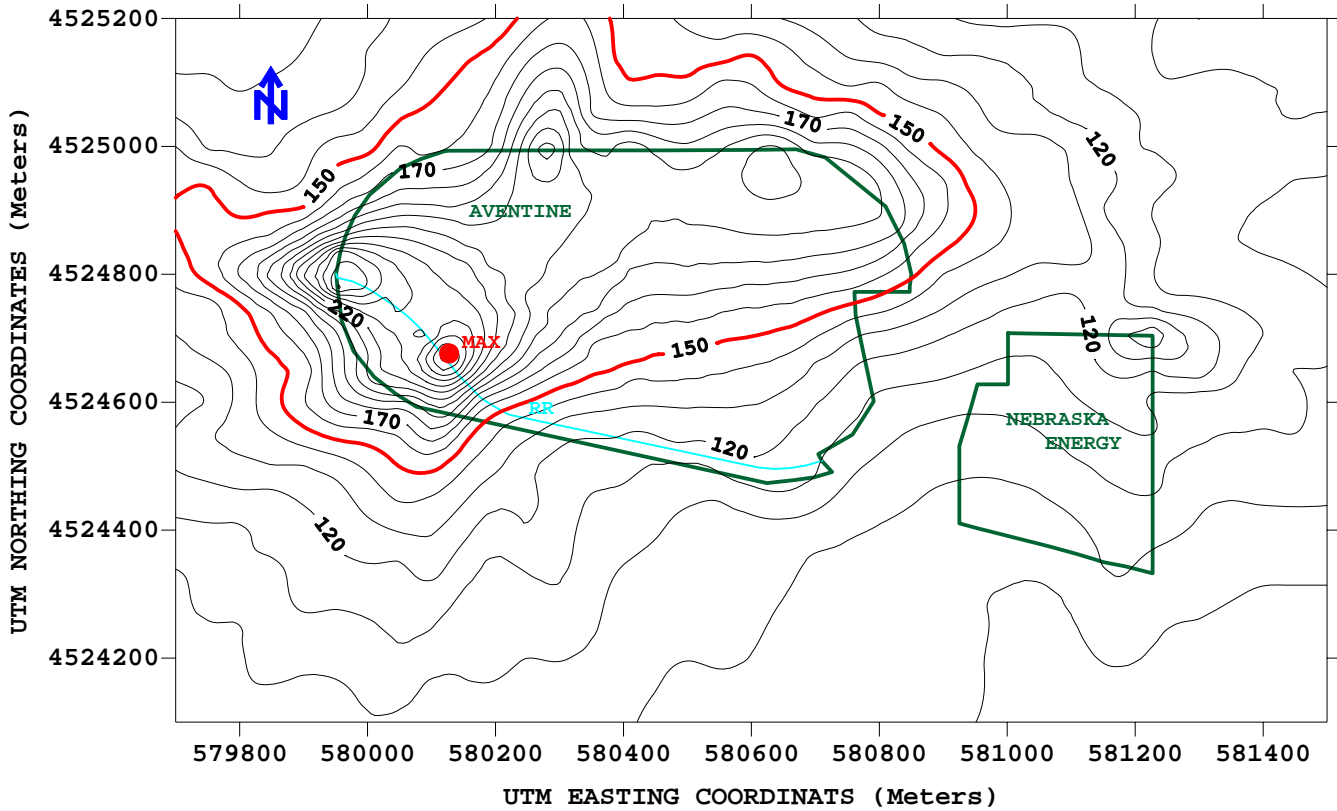
FENCE LINE

FIGURE 6 ALL SOURCES WITHOUT HAUL ROADS
 WITH BACKGROUND

BACKGROUND (60 UG/M^3)

MAXIMUM CONCENTRATION:
 179.69 ug/Mm^3 @ 580772.38 E 4524 691.00 N
 ON JANUARY 26, 2000

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 AVENTINE & NEBRASKA ENERGY SOURCES
 ROADS AND BACKGROUND INCLUDED
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

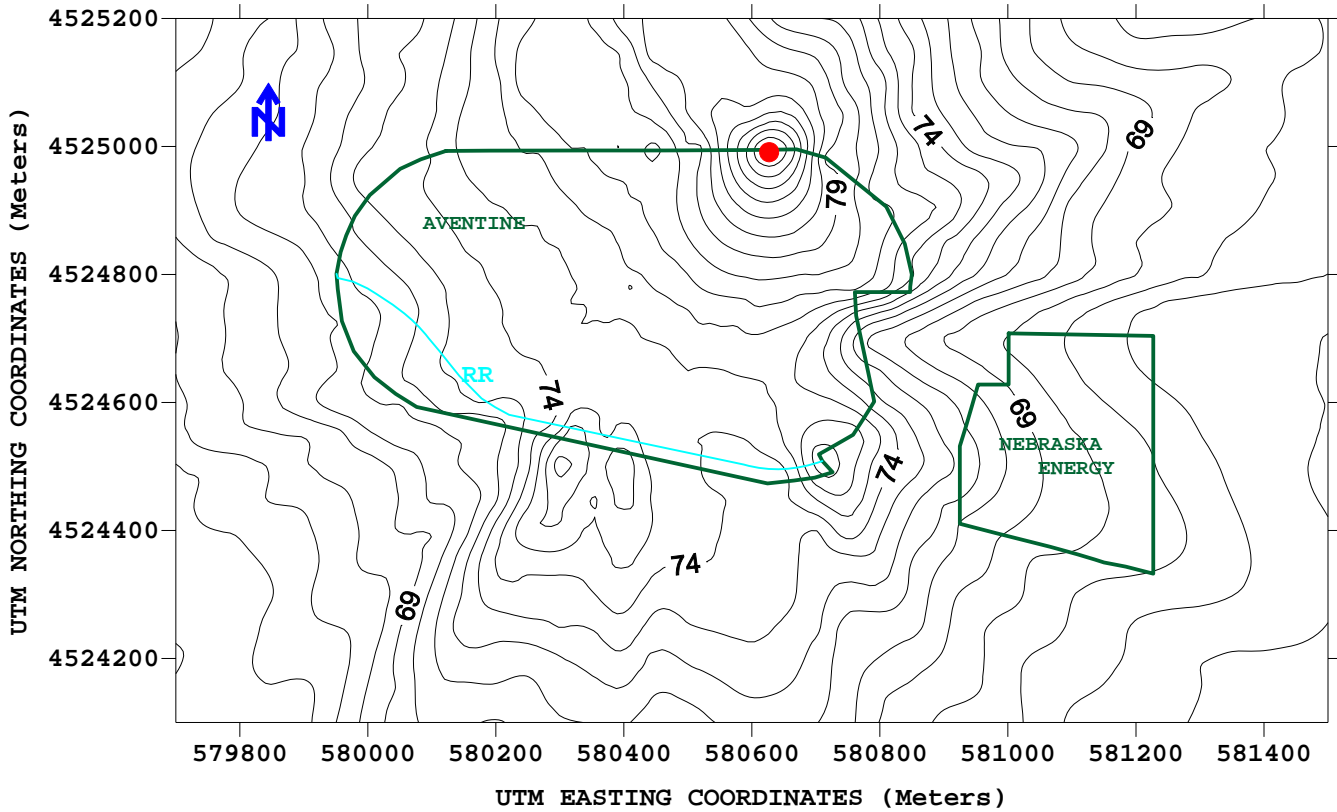
Fence Line

**FIGURE 7 AVENTINE AND NEBRASKA ENERGY SOURCES
 ROADS AND BACKGROUND INCLUDED**

MAXIMUM CONCENTRATION:
 276.54 @ 580127.32 E 4524661.00 N
 ON DECEMBER 31, 2000

BACKGROUND (60 ug/M³)

**PREDICTED H2H 24-HOUR PM10 CONCENTRATIONS
 AVENTINE FACILITY, AURORA, NEBRASKA AREA
 AVENTINE SOURCES
 BACKGROUND NO ROADS
 (MICROGRAMS PER CUBIC METER)**



AERMOD (07026)
 NDEQ METEOROLOGICAL DATA 2000-2004
 SURFACE: GRAND ISLAND
 RADIOSONDE: OMAHA

FENCE LINE

FIGURE 8 AVENTINE SOURCES
 BACKGROUND INCLUDED NO ROADS

MAXIMUM CONCENTRATION: ●
 86.69 @ 580620.13 E 4524995.50 N
 ON OCTOBER 17, 2003

BACKGROUND (60 ug/M³)

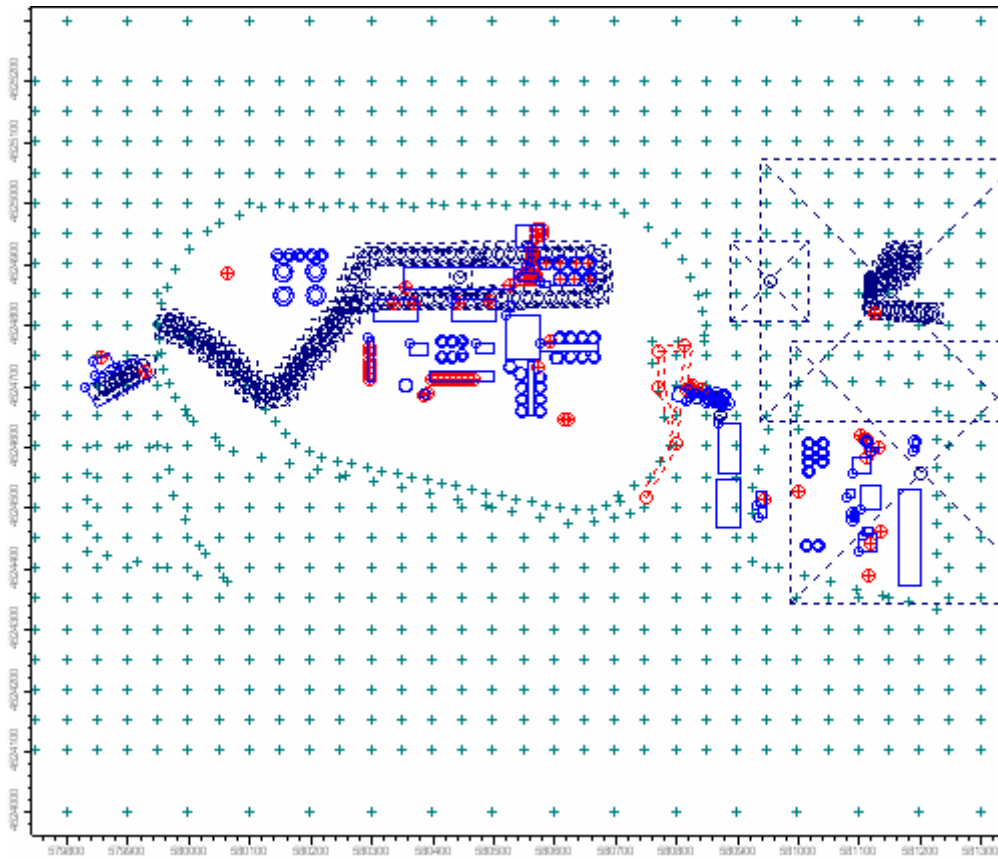


FIGURE 9: AVENTINE & NEARBY SOURCES MODELED

(via email)

Iowa Department of Natural Resources

Air Quality Construction Permit

Permit Holder

Firm: Homeland Energy Solutions, LLC

Contact:
Chad Kuhlers

Responsible Party:
Stephen Eastman
President

(563) 547-3801

951 North Linn Avenue
New Hampton, IA 50659

Permitted Equipment

Emission Unit(s): Dust Emissions from Internal Plant Roads (paved) (i.e. Truck Traffic)
F100

Control Equipment: Best Management Practices
Using sweepers and dust suppression if necessary

Emission Point: F100

Equipment Location: 2797 Iowa Highway 24
Lawler, IA 52154

Plant Number: 19-04-002

Plant Maximum Capacity: 170 Million Gallons per rolling 12-month of Denatured Ethanol
1,700,000 tons (60,714,286 bushels) of corn per rolling 12-month period
1,411,607 tons per rolling 12-month of Wet Distillers' Grain
552,500 tons per rolling 12-month of DDGS

Permit No.	Proj. No.	Description	Date	Testing
07-A-981P	06-672	Original PSD Permit	08/08/2007	Yes



Under the Direction of the Director of
the Department of Natural Resources

PERMIT CONDITIONS

The permit holder, owner and operator of the facility shall assure that the installation, operation, and maintenance of this equipment is in compliance with all of the conditions of this permit and all other applicable requirements. This permit and its provisions are subject to the appeal rights set forth in Iowa Administrative Code (IAC), rule 561—7.5.

1. Departmental Review

This permit is issued based on information submitted by the applicant. Any misinformation, false statements or misrepresentations by the applicant shall cause this permit to be void. In addition, the applicant may be subject to criminal penalties according to Iowa Code Section 455B.146A.

This permit is issued under the authority of 567 Iowa Administrative Code (IAC) 22.3. The proposed equipment has been evaluated for conformance with Iowa Code Chapter 455B; 567 IAC Chapters 20 – 34; and 40 CFR Parts 51, 52, 60, 61, and 63 and has the potential to comply.

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. The DNR assumes no liability, directly or indirectly, for any loss due to damage to persons or property caused by, resulting from, or arising out of the design, installation, maintenance or operation of the proposed equipment.

2. Transferability

As limited by 567 IAC 22.3(3)"P", this permit is not transferable from one location to another or from one piece of equipment to another, unless the equipment is portable. When portable equipment for which a permit has been issued is to be transferred from one location to another, the DNR shall be notified in writing at least thirty (30) days prior to transferring to the new location (See Permit Condition 8.A.6). The owner will be notified at least ten (10) days prior to the scheduled relocation if the relocation will cause a violation of the National Ambient Air Quality Standards (NAAQS). In such case, a supplements permit shall be required prior to the initiation of construction of additional control equipment or equipments modifications needed to meet the standards.

The permit is for the construction and operation of specific emission unit(s), control equipment, and emission point as described in this permit and in the application for this permit. Any owner or operator of the specified emission unit(s), control equipment, or emission point, including any person who becomes an owner or operator subsequent to the date on which this permit is issued, is responsible for compliance with the provisions of this permit. No person shall construct, install, reconstruct or alter this emissions unit, control equipment or emission point without the required revisions to this permit.

3. Construction

It is the owner's responsibility to ensure that construction conforms to the final plans and specifications as submitted, and that adequate operation and maintenance is provided to ensure that no condition of air pollution is created.

This permit shall become void if any one of the following conditions occur:

- (1) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not initiated within eighteen (18) months after the permit issuance date; or
- (2) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not completed within thirty-six (36) months after the permit issuance date; or
- (3) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not completed within a time period specified elsewhere in this permit.

3. Construction (Continued)

3.a. Original Permits

The owner or operator shall obtain a new permit if any changes are made to the final plans and specifications submitted for the proposed project.

3.b. Modified or Supplemental Permits

This permit supersedes any and all previous permits issued for the emission point(s) or emission unit(s) permitted herein.

However, the permittee may continue to act under the provisions of the previous permit for the emission point(s) or emission unit(s) until one of the following conditions occurs:

- (1) The proposed project authorized by this permit is completed as it affects the emission point(s) permitted herein; or
- (2) The permit becomes void.

The owner or operator shall obtain a new permit if:

- (1) Any changes are made to the final plans and specifications submitted for the proposed project; or
- (2) This permit becomes void.

4. Credible Evidence

As stated in 567 IAC 21.5 and also in 40 CFR Part 60.11(g), where applicable, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions specified in this permit or any provisions of 567 IAC Chapters 20 through 34.

5. Owner Responsibility

Issuance of this permit shall not relieve the owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan (SIP), and any other requirements of local, state, and federal law.

The owner or operator of any emission unit or control equipment shall maintain and operate the equipment and control equipment at all times in a manner consistent with good practice for minimizing emissions, as required by paragraph 567 IAC 24.2(1) "*Maintenance and Repair*".

6. Excess Emissions

Excess emissions during a period of startup, shutdown, or cleaning of control equipment are not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions except when another regulation applicable to the unit or process provides otherwise. Cleaning of control equipment, which does not require the shutdown of process equipment, shall be limited to one six-minute period per one-hour period. An incident of excess emissions other than the above is a violation and may be subject to criminal penalties according to Iowa Code 455B.146A. If excess emissions are occurring, either the control equipment causing the excess shall be repaired in an expeditious manner, or the process generating the emissions shall be shutdown within a reasonable period of time, as specified in 567 IAC 24.1.

An incident of excess emissions shall be orally reported to the appropriate DNR field office within eight (8) hours of, or at the start of, the first working day following the onset of the incident (See section 8.B.1). A written report of an incident of excess emissions shall be submitted as a follow-up to all required oral reports within seven (7) days of the onset of the upset condition.

7. Disposal of Contaminants

The disposal of materials collected by the control equipment shall meet all applicable rules.

8. Notification, Reporting, and Recordkeeping

- A. The owner shall furnish the DNR the following written notifications:
1. The date construction, installation, or alteration is initiated postmarked within thirty (30) days following initiation of construction, installation, or alteration;
 2. The actual date of startup, postmarked within fifteen (15) days following the start of operation;
 3. The date of each compliance test required by Permit Condition 12, at least thirty (30) days before the anticipated compliance test date;
 4. The date of each pretest meeting, at least fifteen (15) days before the proposed meeting date. The owner shall request a proposed test plan protocol questionnaire at least sixty (60) days prior to each compliance test date. The completed questionnaire shall be received by the DNR at least fifteen (15) days before the pretest meeting date;
 5. Transfer of equipment ownership, within 30 days of the occurrence;
 6. Portable equipment relocation, at least thirty (30) days before equipment relocation.
- B. The owner shall furnish the DNR with the following reports:
1. Oral excess emissions reports, in accordance with 567 IAC 24.1;
 2. A written compliance demonstration report for each compliance testing event, whether successful or not, postmarked not later than six (6) weeks after the completion of the test period unless other regulations provide for other notification requirements. In that case, the more stringent reporting requirement shall be met;
 3. Operation of this emission unit(s) or control equipment outside of those limits specified in Permit Conditions 10 and 14 and according to the schedule set forth in 567 IAC 24.1.
- C. The owner shall send correspondence regarding this permit to the following address:
- Construction Permit Supervisor
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, IA 50322
Telephone: (515) 281-8189
Fax: (515) 242-5094
- D. The owner shall send correspondence concerning stack testing to:
- Stack Testing Coordinator
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322
Telephone: (515) 242-6001
FAX: (515) 242-5127
- E. The owner shall send reports and notifications to:

Compliance Unit Supervisor Air Quality Bureau Iowa Department of Natural Resources 7900 Hickman Road, Suite 1 Urbandale, IA 50322 Telephone: (515) 281-8448 Fax: (515) 242-5127	Field Office 1, Manchester 909 West Main Street Suite 4 Manchester, IA 52057 Telephone: (563) 927-2640 Fax: (563) 927-2075
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8. Notification, Reporting, and Recordkeeping (Continued)

F. All data, records, reports, documentation, construction plans, and calculations required under this permit shall be available at the plant during normal business hours for inspection and copying by federal, state, or local air pollution regulatory agencies and their authorized representatives, for a minimum of two (2) years from the date of recording.

9. Permit Violations

Knowingly committing a violation of this permit may carry a criminal penalty of up to \$10,000 per day fine and 2 years in jail according to Iowa Code Section 455B.146A.

10a. PSD Emission Limits

Pollutant	Limits	Reference (567 IAC)
Particulate Matter (PM)	See note 1	BACT
PM ₁₀	See note 1	BACT
Opacity	See note 2	BACT

¹ BACT limits for PM and PM₁₀ are expressed in the form of a work practice standard. See Condition 14 for details.

² No visible emissions shall be observed beyond the lot line of the property.

10b. Other Emission Limits

Pollutant	lb/hr ¹	tons/yr ²	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	NA	96.48	NA	NA
PM ₁₀	NA	18.78	NA	NA
Opacity	NA	NA	4	23.3(2)"c"
Sulfur Dioxide (SO ₂)	NA	NA	NA	NA
Nitrogen Oxides (NO _x)	NA	NA	NA	NA
Volatile Organic Compounds	NA	NA	NA	NA
Carbon Monoxide (CO)	NA	NA	NA	NA
Lead (Pb)	NA	NA	NA	NA
(Single HAP)	NA	NA	NA	NA
(Total HAP)	NA	NA	NA	NA

¹ Standard is expressed as the average of three (3) runs.

² Standard is a 12-month rolling total.

11. Emission Characteristics

This emission point shall conform to the specifications listed below:

Parameter	Value
Stack Height, (ft, from the ground)	NA
Discharge Style	NA
Stack Opening, (inches, dia.)	NA
Exhaust Temperature (°F)	Ambient
Exhaust Flowrate (scfm)	NA

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

12. Compliance Demonstration(s) and Performance Testing

Pollutant	Initial	Subsequent	Methodology	Frequency
PM (federal)	No	No	NA	NA
PM (state)	No	No	NA	NA
PM ₁₀	No	No	NA	NA
Opacity	No	No	NA	NA
SO ₂	No	No	NA	NA
NO _x	No	No	NA	NA
VOC	No	No	NA	NA
CO	No	No	NA	NA
Silt Loading	Yes	Yes	Silt Loading test	Quarterly
Pb	No	No	NA	NA
HAP	No	No	NA	NA

If an initial compliance demonstration specified above is testing, the owner shall verify compliance with the emission limitations contained in Permit Condition 10 within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.

If subsequent testing is specified above, the owner shall verify compliance with the emission limitations contained in Permit Condition 10 according to the frequency noted above.

If testing is required, the owner shall use the test method and run time listed in the table below unless another testing methodology is approved by the Department prior to testing.

Pollutant	Test Run Time	Test Method
PM (federal)	1 hour	40 CFR 60, Appendix A, Method 5
PM (state)	1 hour	Iowa Compliance Sampling Manual Method 5
PM ₁₀	1 hour	40 CFR 51, Appendix M, 201A with 202
Opacity	1 hour	40 CFR 60, Appendix A, Method 9
SO ₂	1 hour	40 CFR 60, Appendix A, Method 6C
NO _x	1 hour	40 CFR 60, Appendix A, Method 7E
VOC	1 hour	40 CFR 60, Appendix A, Method 25A
CO	1 hour	40 CFR 60, Appendix A, Method 10
Pb	1 hour	40 CFR 60, Appendix A, Method 12
Other		

The unit(s) being sampled should be operated in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which this unit(s) will be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the Department that this unit(s) has been physically altered so that capacity cannot be exceeded, or the Department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the Department to determine whether this unit(s) is in compliance.

Each emissions compliance test must be approved by the Department. Unless otherwise specified by the Department, each test shall consist of three (3) separate runs. The arithmetic mean of three (3) acceptable test runs shall apply for compliance, unless otherwise indicated by the Department.

A pretest meeting shall be held at a mutually agreeable site no less than fifteen (15) days prior to the date of each test. Representatives from the Department shall attend this meeting, along with the owner and the testing firm, if any. It shall be the responsibility of the owner to coordinate and schedule the pretest meeting. The owner shall be responsible for the installation and maintenance of test ports. The Department shall reserve the right to impose additional, different, or more detailed testing requirements.

13. NSPS and NESHAP Applicability

A NSPS does not apply at this time.

A NESHAP does not apply at this time.

14. Operating Limits

- A. The haul roads shall be paved prior to receiving grain at the facility.
- B. Any spills on the road shall be cleaned up immediately.
- C. Truck traffic emissions on the paved road shall be controlled by water flushing (except as noted below) and sweeping (see 15C) once per day.
 - (i) Water flushing may be suspended when the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) only sweeping is required for these periods. Water flushing and/or sweeping is not required for days of inclement weather.
 - (ii) Water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period (midnight to midnight).
 - (iii) Water flushing and sweeping need not occur if the plant does not receive any truck traffic that day (i.e. on a weekend or holiday).
 - (iv) Daily water flushing need not occur provided that the haul road emissions do not exceed 67.5 tons PM (70% of PM) for the previous 365-day rolling total. Provided the 365 day total remains below 67.5 tons for the previous 365-day rolling total only daily sweeping is required. In the event that PM emissions exceed 67.5 tons for the previous 365-day rolling total the plant shall be required to commence daily water flushing with daily sweeping until PM emissions fall below 67.5 tons for the previous twelve month rolling total.
- D. Silt load performance testing shall be completed quarterly with the initial testing being performed within 60 days of receiving grain at the facility. Testing shall be completed prior to water flushing and/or sweeping for that day. Provided the results demonstrate compliance with the PM and PM₁₀ ton per year emission limits in Section 10, reduced frequency of testing may be requested after 12 performance tests have been completed.
- E. The owner/operator shall record the weight, truck type, and number of trucks that load/unload each material on a daily basis. Based on the number of trucks the total Vehicle Miles Traveled (VMT) shall be calculated each day.
- F. The silt loading value shall be the average of the four most recent silt load tests. Until there are four tests available, the application silt load number shall be used.
- G. The owner / operator is limited to a maximum of 275,000 miles per 365 day rolling total. The 365 day rolling total is allowed to lag seven days.

15. Operating Condition Monitoring

All records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Record the frequency of sweeping performed on the haul roads. If the roads are not swept due to weather, a written record must be kept on site outlining the conditions.
- B. Performance testing on the haul road surface silt loading shall be completed on a quarterly basis. For each performance test, silt loading sampling shall be done for at least 3 different locations. Performance testing shall be completed prior to water flushing and/or sweeping.

(15. Operating Condition Monitoring (continued))

- C. The plant shall maintain a log for the haul roads that show the following:
- a. The silt content of the road for that quarter based on testing;
 - b. The date of performance testing;
 - c. The vehicle miles traveled (VMT) for each day,
 - d. The weight of each truck full and empty,
 - e. The number of each truck type,
 - f. Each day record whether or not water flushing and sweeping was accomplished. For days w/o water flushing and/or sweeping record the circumstances (i.e. weather condition, equipment malfunction);
 - g. The amount of water applied and the areas treated;
 - h. The operator's initials.
- D. The owner or operator shall calculate and record the daily haul road emissions according to the equations from AP-42 Section 13.2.1.
- E. The owner or operator shall update daily the 365 day rolling total of PM and PM₁₀ emissions by adding up the calculated daily emissions for the previous 365 days. The plant shall notify DNR immediately if the 365 day rolling total exceeds 96.48 tons PM or 18.78 tons of PM₁₀.
- F. The owner or operator shall calculate the 365 day rolling total miles traveled.
-

16. Continuous Emission Monitoring

Continuous emission monitoring is not required at this time.

17. Departmental Review

acfm	Actual cubic feet per minute
Applicant	The owner, company official or authorized agent
CFR	Code of Federal Regulations
Department	Iowa Department of Natural Resources
DNR	Iowa Department of Natural Resources
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous Air Pollutant(s)
IAC	Iowa Administrative Code
MMBtu	One million British thermal units
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
Owner	The owner or authorized representative
Permit	This document including permit conditions and all submitted application materials
PM ₁₀	Particulate Matter equal to or less than 10 microns in aerodynamic diameter
scfm	Standard cubic feet per minute
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
VOC	Volatile Organic Compound

END OF PERMIT CONDITIONS