



# Air Quality Construction Permit

**Permit Number:** 82-A-092-P12

**Plant Number:** 70-01-008

**Company:** Monsanto Company

**Contact Person:**  
Mark Mathias  
Environmental Engineer

**Responsible Party:**  
Shawn Schrader  
Plant Manager

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2500 Wiggins Road  
Muscatine, Iowa 52761

## Permitted Equipment

**Emission Point ID:** EP-195

**Emission Unit(s) and Control Equipment:**

EU ID	Description	Maximum Rated Capacity	Control Equipment Description and ID
EU-3819-1-115-4	Boiler #8	147.6 MMBtu/hr	Low NOx burners

**Equipment Location:** 2500 Wiggins Road  
Muscatine, Iowa 52761

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.

Project Number	Project Description	Stack Testing	Issuance Date
16-201	Convert Boiler to Natural Gas Only	Yes	11/01/16

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

## PERMIT CONDITIONS

### 1a. BACT Emission Limits

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>(1)</sup>	tons/yr <sup>(2)</sup>	Additional Limits	Reference/Basis
Particulate Matter (PM) <sup>(3)</sup>	NA	NA	0.03 lb/MMBtu <sup>(1)</sup>	BACT
Opacity	NA	NA	20% <sup>(4)</sup>	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	NA	1.95 lb/MMBtu <sup>(5)</sup>	BACT
Nitrogen Oxides (NO <sub>x</sub> )	NA	NA	0.60 lb/MMBtu <sup>(6)</sup>	BACT

<sup>(1)</sup> The emission limit is expressed as the average of three (3) runs.

<sup>(2)</sup> The emission limit is based on a twelve (12) month rolling total.

<sup>(3)</sup> Filterable only (front half).

<sup>(4)</sup> The emission limit is a six (6) minute average.

<sup>(5)</sup> Standard is a 3-hour rolling average basis.

<sup>(6)</sup> Standard is a 30-day rolling average basis.

### 1b. Other Emission Limits

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>(1)</sup>	tons/yr <sup>(2)</sup>	Additional Limits	Reference/Basis
Particulate Matter (PM) - State	7.5 <sup>(3)</sup>	NA	NA	NA
PM <sub>10</sub>	2.24	NA	NA	NAAQS
PM <sub>2.5</sub>	2.24 <sup>(4)</sup>	NA	NA	NAAQS
Sulfur Dioxide (SO <sub>2</sub> )	75.0 <sup>(5)</sup>	NA	NA	RACT
Nitrogen Oxides (NO <sub>x</sub> )	90	NA	NA	NAAQS

<sup>(1)</sup> The emission limit is expressed as the average of three (3) runs.

<sup>(2)</sup> The emission limit is based on a twelve (12) month rolling total.

<sup>(3)</sup> Emission limit established in Project 95-358.

<sup>(4)</sup> Limit requested by facility to demonstrate attainment with the 24-hour and annual PM<sub>2.5</sub> NAAQS.

<sup>(5)</sup> The SO<sub>2</sub> limit is established to address the nonattainment designation for a portion of Muscatine County published in the Federal Register (78 FR 47191) on August 5, 2013. The nonattainment designation is for the 1-hour SO<sub>2</sub> primary national ambient air quality standard promulgated by EPA in 2010 (75 FR 35519, June 22, 2010).

## 2. Compliance Demonstration(s)

Compliance Demonstration Table

Pollutant	Compliance Methodology	Frequency	Test Run Time	Test Method
PM	None	NA	1 hour	40 CFR 60, Appendix A, Method 5
PM - State	None	NA	1 hour	40 CFR 60, Appendix A, Method 5 40 CFR 51 Appendix M Method 202
PM <sub>10</sub>	None	NA	1 hour	40 CFR 51, Appendix M, 201A with 202
PM <sub>2.5</sub>	None	NA	7 hours	40 CFR 51, Appendix M, 201A with 202
Opacity	None	NA	1 hour	40 CFR 60, Appendix A, Method 9
SO <sub>2</sub>	None	NA	1 hour	40 CFR 60, Appendix A, Method 6C
NO <sub>x</sub>	Stack Testing	One-time	1 hour	40 CFR 60, Appendix A, Method 7E

## 2. Compliance Demonstration(s) (Continued)

If an initial stack test is specified in the "Compliance Demonstration Table," the owner or the owner's authorized agent shall demonstrate compliance with the emission limitations contained in this condition within the applicable time period specified below:

- Within sixty (60) days after achieving the maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment for the addition of new equipment or the physical modification of existing equipment or control equipment.
- Within ninety (90) days of the issuance of this permit if there is no physical modification to any emission units or control equipment.

If any additional stack testing beyond an initial test (i.e. quarterly, semi-annual, annual, etc.) is required in "Compliance Demonstration Table," the owner or the owner's authorized agent shall demonstrate compliance with the emission limitations contained in this condition as specified in the "Compliance Demonstration Table." See Conditions 12.A.(4) and 12.B.(5) for notification and reporting requirements.

If stack testing is required, the owner or the owner's authorized agent shall use the test method and run time listed in the "Compliance Demonstration Table" unless another testing methodology is approved by the Department prior to testing.

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.

Per 567 IAC 25.1(7)"a", at the Department's request, a pretest meeting shall be held not later than fifteen (15) days before the owner or operator conducts the compliance demonstration. A testing protocol shall be submitted to the Department no later than fifteen (15) days before the owner or operator conducts the compliance demonstration. 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. A representative of the Department shall be allowed to witness the test(s). The Department shall reserve the right to impose additional, different, or more detailed testing requirements.

The owner shall be responsible for the installation and maintenance of test ports. The unit(s) being sampled shall 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.

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## 3. Emission Point Characteristics

This emission point shall conform to the specifications listed below:

Parameter	Value
Stack Height (feet from the ground)	80
Discharge Style	Vertical Unobstructed
Stack Outlet Dimensions (inches)	54
Exhaust Temperature (°F)	375
Exhaust Flowrate (acfm)	46,827

The temperature and flowrate 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 characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

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#### 4. Federal Standards

##### A. New Source Performance Standards (NSPS):

This emission unit is not currently subject to any of the NSPS standards, as it was constructed prior to the Subpart Db applicability date of June 19, 1984, and not subsequently modified as to increase hourly emissions of NO<sub>x</sub>, SO<sub>x</sub>, or PM.

NOTE: The absence of the inclusion of any NSPS requirements as part of this permit does not relieve the owner or operator from any obligation to comply with all applicable NSPS conditions.

#### 4. Federal Standards (Continued)

##### B. National Emission Standards for Hazardous Air Pollutants (NESHAP):

For information only: This equipment is of the source category affected by the following federal regulation: *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters* [40 CFR Part 63, Subpart DDDDD].

NOTE: The absence of the inclusion of any NESHAP requirements as part of this permit does not relieve the owner or operator from any obligation to comply with all applicable NESHAP conditions.

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#### 5. Operating Requirements and Associated Recordkeeping

Unless specified by a federal regulation, 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 Department. Records shall be legible and maintained in an orderly manner.

- A. The boiler is limited to firing on natural gas only.

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#### 6. Continuous Emission Monitoring

Continuous emission monitoring is not required by this permit at this time.

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#### 7. Department Review

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 – 35; and 40 Code of Federal Regulations (CFR) Parts 51, 52, 60, 61, and 63 and has the potential to comply. This permit is issued based on information submitted by the applicant. Any misinformation, false statements or misrepresentations by the applicant or by the applicant's representative(s) shall cause this permit to be void.

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 Department 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.

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#### 8. Owner and Operator Responsibility

This 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. The permit holder, owner, and operator of the facility shall assure that the installation of the equipment listed in this permit conforms to the design in the application (i.e. type, maximum rated capacity, etc.). No person shall construct, install, reconstruct or alter this emission unit(s), control equipment, or emission point without the required amended 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 assuring that the installation, operation, and maintenance of the equipment listed in this permit is in compliance with the provisions of this permit and all other applicable requirements and that adequate operation and maintenance is provided to ensure that no condition of air pollution is created.

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## 9. Transferability

Unless the equipment is portable, this permit is not transferable from one location to another or from one piece of equipment to another. See Condition 12.A.(2) for notification requirements for relocating portable equipment (567 IAC 22.3(3)“f”).

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## 10. Construction

### A. General Requirements:

It is the owner's responsibility to ensure that construction conforms to the final plans and specifications as submitted.

In permit amendments, all provisions of the original permit remain in full force and effect unless they are specifically changed by the permit amendment. If a proposed project is not timely completed, the owner or operator shall seek a permit amendment in order to revert back to the most recent previous version of the permit. The previous, unchanged permit provisions are included in the amendment for your convenience only and are unappealable.

This permit or amendment shall become void if any one of the following conditions occurs:

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

### B. Changes to Plans and Specifications:

The owner or operator shall amend this permit or amendment prior to startup of the equipment if:

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

Changes to the final plans and specification shall include changes to plans and specifications for permitted equipment and control equipment and the specified operation thereof.

### C. Amended Permits:

The owner or operator may continue to act under the provisions of the previous permit for the affected emission unit(s) and emission point, together with any previous amendment to the permit, until one of the following conditions occurs:

- (1) The proposed project authorized by this amendment is completed as it affects the emission unit(s) and emission point permitted herein; or
  - (2) This current amendment becomes void.
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## 11. Excess Emissions

Per 567 IAC 24.1(1), 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 (1) six-minute period per one (1) 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 by telephone, electronic mail or in person to the appropriate field office within eight (8) hours of, or at the start of, the first working day following the onset of the incident (See Permit Condition 12.B.1). A written report of an incident of excess emissions shall be submitted as a follow-up to all required initial reports within seven (7) days of the onset of the upset condition (See Permit Condition 12.B.2).

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## 12. Notification, Reporting, and Recordkeeping

- A. The owner or operator shall furnish the Department the following written notifications:
- (1) Per 567 IAC 22.3(3)"b":
    - (a) The date construction, installation, or alteration is initiated postmarked within thirty (30) days following initiation of construction, installation, or alteration.
    - (b) The actual date of startup, postmarked within fifteen (15) days following the start of operation.
  - (2) Per 567 IAC 22.3(3)"f," when portable equipment for which a permit has been issued is to be transferred from one location to another, the Department shall be notified:
    - (a) At least fourteen (14) days before equipment relocation if the equipment will be located in a nonattainment area for the National Ambient Air Quality Standards (NAAQS) or a maintenance area for the NAAQS.
    - (b) At least seven (7) days before equipment relocation.
  - (3) Per 567 IAC 22.3(8), a new owner shall notify the Department of the transfer of equipment ownership within thirty (30) days of the occurrence. The notification shall include the following information:
    - The date of ownership change; the name, address, and telephone number of the responsible official, the contact person, and the owner of the equipment both before and after the ownership change; and the construction permit number(s) of the equipment changing ownership.
  - (4) Unless specified per a federal regulation, the owner or the owner's authorized agent shall notify the Department in writing not less than thirty (30) days before a required test or performance evaluation of a continuous emission monitor [567 IAC 25.1(7)]. The notification shall include:
    - The time; the place; the name of the person who will conduct the tests; and other information as required by the Department.

If the owner or operator does not provide timely notice to the Department, the Department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with the applicable rules or permit conditions. Upon written request, the Department may allow a notification period of less than thirty (30) days.

- B. The owner or operator shall furnish the Department with the following reports:
- (1) Per 567 IAC 24.1(2), an incident of excess emissions as defined in 567 IAC 20.2 shall be reported within eight (8) hours or at the start of the first working day following the onset of the incident. The report may be made by electronic mail, in person or by telephone.
  - (2) Per 567 IAC 24.1(3), a written report of an incident of excess emissions as defined in 567 IAC 20.2 shall be submitted as a follow-up to all required initial reports to the Department within seven (7) days of the onset of the upset condition.
  - (3) Operation of this emission unit(s) or control equipment outside of those operating parameters specified in Permit Condition 5 in accordance to the schedule set forth in 567 IAC 24.1.
  - (4) Per 567 IAC 25.1(6), the owner or operator of any facility required to install a continuous monitoring system or systems shall provide quarterly reports to the Director, no later than thirty (30) calendar days following the end of the calendar quarter, on forms provided by the Director.
  - (5) Per 567 IAC 25.1(7), 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.
- C. 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 unless otherwise required by another applicable law (i.e. NSPS, NESHAP, etc.)
- D. Information regarding this permit should be sent to the attention of the following individuals based on the type of information being submitted: change in ownership (Air Quality Bureau Records Center), permit correspondence (Construction Permit Supervisor), stack testing correspondence (Stack Test Coordinator), and reports and notifications (Compliance Unit Supervisor and DNR Field Office). The addresses are:

Air Quality Bureau Iowa Department of Natural Resources 7900 Hickman Road, Suite 1 Windsor Heights, IA 50324 Telephone: (515) 725-9549 Fax: (515) 725-9502	DNR Field Office 6 1023 West Madison Washington, IA 52353 Telephone: (319) 653-2135 Fax: (319) 653-2856
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### 13. Appeal Rights

All conditions within an original permit may be appealed, subject to the appeal rights set forth in 561 IAC Chapter 7. Amended conditions within a permit amendment may be appealed, subject to the appeal rights set forth in 561 IAC Chapter 7. In permit amendments, all provisions of the original permit remain in full force and effect unless they are specifically changed by the permit amendment. The previous, unchanged permit provisions are included in the amendment for your convenience only and are unappealable.

### 14. Permit History

Permit No.	Project No.	Description	Date	Stack Testing
82-A-092	82-060	Original Permit	03/26/85	Yes
82-A-092-S1	NA	Allow Sludge (Rescinded Condition)	03/24/86	Yes
82-A-092-S2	NA	Modify Sludge Condition (Conditional Permit)	05/10/90	No
82-A-092-S3	95-358	Reconcile With Consent Order 95-AQ-24	08/30/95	No
82-A-092-S4	97-504	Add Waste Catalyst	10/30/97	Yes
82-A-092-S5	02-242	Reconcile with Amended 95-AQ-24	06/25/02	Yes
82-A-092-S6	02-700	Modify Operating Limits	02/24/03	Yes
82-A-092-S7	03-171	Modify Hg Limit in Condition 10	06/17/03	Yes
82-A-092-S8	06-252	Modify Stack Diameter/Location	07/25/06	No
82-A-092-P9	06-494	Add Seed Corn Combustion	03/09/07	Yes
82-A-092-P10	12-280	Establish PM <sub>2.5</sub> Emission Limit	10/24/12	No
82-A-092-P11	15-033	Establish 1-hr SO <sub>2</sub> Limit	05/13/15	Yes

**END OF PERMIT**