Iowa Department of Natural Resources
Air Quality Construction Permit

Permit Holder

Firm: Muscatine Power and Water

Contact:

Jean Brewster
Mgr. Environmental Affairs

563-262-3259

3205 Cedar Street
Muscatine, IA 52761

Responsible Party:

Jean Brewster
Mgr. Environmental Affairs

Permitted Equipment

Emission Unit(s): Unit 9 Tangentially Fired Boiler (EU90)
Maximum Heat Input: 1556 MMBtu/hr, fired by either coal or fuel oil

Control Equipment: 2 Electrostatic Precipitators (ESP) CE91, CE92, Over-fired Air (CE95)
2 Scrubbers CE93, CE94

Emission Point: EP90

Equipment Location: 1700 Dick Drake Way.
Muscatine, IA 52761

Plant Number: 70-01-011

Permit No.	Proj. No.	Description	Date	Testing
80-A-191	80-243	Original DNR permit	11/21/80	Yes
80-A-191-P1	07-355	Add overfired air, PSD for CO	10/31/07	Yes
80-A-191-P2	12-290	Add PM_{10} and $PM_{2.5}$ limits	07/22/13	Yes

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

CPFP|7001011|072213|12290|80A191P2

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)"f", 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 fourteen (14) days prior to transferring to the new location unless the equipment will be located in an area which is classified as nonattainment for the National Ambient Air Quality Standards (NAAQS) or is a maintenance area for the NAAQS in which case notification shall be given thirty (30) days prior to the relocation of equipment[1] (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 (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.

[1] A list of nonattainment areas and maintenance areas for the NAAQS can be obtained from the Department.

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.

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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.

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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"*.

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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:
      a. at least thirty (30)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 fourteen (14) days before equipment relocation.

B. The owner shall furnish the DNR with the following reports:
   1. 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
Windsor Heights, IA 50324
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
Windsor Heights, IA 50324
Telephone: (515) 281-4899
Fax: (515) 242-5098

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 Windsor Heights, IA 50324 Telephone: (515) 281-8448 Fax: (515) 242-5127	DNR Field Office 6 1023 West Madison Washington, IA 52353 Telephone: (319) 653-2135 Fax: (319) 653-2856

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.

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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. BACT Emission Limits

Pollutant	lb/day	tons/yr	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	NA	NA	0.03 lb/MMBtu [1]	LAER
Nitrogen Oxides (NO_X)	NA	NA	0.60 lb/MMBtu [7]	BACT
Sulfur Dioxide (SO_2)	0.56 lb/MMBtu [5]	NA	0.45 lb/MMBtu [4] 92% reduction [6]	LAER
Carbon Monoxide (CO)	NA	720 [2]	100 ppm [3]	BACT

[1] Standard is expressed as the average of three (3) runs. Reference EPA permit 80-E-001 of January 24, 1980

[2] Standard is a 12-month rolling total, and includes startup, shutdown, and malfunctions. To allow for a shakedown period for the combustion optimization system, this standard becomes effective 90 boiler operating days after installation of the overfire air, or July 21, 2008, whichever comes first.

[3] Standard is averaged over a calendar day, and does not include startup, shutdown and malfunction. To allow for a shakedown period for the combustion optimization system, this standard becomes effective 90 boiler operating days after installation of the overfire air, or July 21, 2008, whichever comes first.

[4] From IDNR 12/14/82 "Revised Agreement Establishing Lowest Achievable Air Contaminant Emission Rate and Offsets for Sulfur Dioxide (SO2)". Standard is a 30-day rolling average

[5] From IDNR 12/14/82 "Revised Agreement Establishing Lowest Achievable Air Contaminant Emission Rate and Offsets for Sulfur Dioxide (SO2)". Standard is a maximum daily average.

[6] From IDNR 12/14/82 "Revised Agreement Establishing Lowest Achievable Air Contaminant Emission Rate and Offsets for Sulfur Dioxide (SO2)". Standard is a 30-day rolling average for the flue gas desulfurization system.

[7] For bituminous coal. BACT NOx limits are the NOx emissions specified in NSPS Subpart Da, so limit for subbituminous coal is 0.50 lb/MMBtu, limit for oil is 0.30 lb/MMBtu, limit for gas is 0.20 lb/MMBtu, and for other fuel types, or if two or more fuels are combusted simultaneously, the NOx BACT limit shall be the limit specified in 40 CFR 60.44a(a) and/or as determined by the proration procedures specified in 40 CFR 60.44a(c). Reference EPA permit 80-E-001 of January 24, 1980. Standard is a 30-day rolling average.

10b. Other Emission Limits

Pollutant	lb/hr[1]	tons/yr[2]	Additional Limits	Reference (567 IAC)
Federal Particulate Matter (PM)	NA	NA	0.03 lb/MMBTU[1, 11]	40 CFR 60.42 Da(a)
PM_{10}	46.68[3]	NA	NA	NAAQS
$PM_{2.5}$	43.59[4]	NA	NA	NAAQS
Opacity	NA	NA	20%[5]	40 CFR 60.42 Da(b)
Sulfur Dioxide (SO_2)	NA	NA	70% reduction[6]	40 CFR 60.42 Da(a)
Nitrogen Oxides (NO_X)	NA	NA	0.60 lb/MMBTU[7] 65% reduction[8] 0.235 lb/MMTU[9]	40 CFR 60.42 Da(a)
Volatile Organic Compounds	NA	NA	NA	NA
Carbon Monoxide (CO)	329.2[10]	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.

[3] The limit for PM_{10} emissions is established for air dispersion modeling.

[4] The limit for $PM_{2.5}$ emissions is established to address the "Finding of Substantial Inadequacy of Implementation Plan; Call for Iowa SIP Revision" for $PM_{2.5}$ published in the Federal Register (76 FR 9706) on February 22, 2011.

[5] Except for one 6-minute period per hour of not greater than 27% opacity. Standard is a 6-minute average.

[6] When combusting solid or solid-derived fuels, 30% of the potential combustion concentration (70% reduction). When combusting liquid or gaseous fuels, 0.8 lb/MMBtu and 10% of the potential combustion concentration, or 100% of the potential combustion concentration (zero percent reduction) when emissions are less than 0.20 lb/MMBtu. If different fuels are combusted simultaneously, the applicable standard is determined by proration using the formula set forth in 40 CFR 60.43Da(h)(2). Standard is a 30-day rolling average. (40 CFR 60.43Da(g)). After the initial performance test, compliance with the SO2 emission limitations and percentage reduction requirements under 60.43Da is based on the average emission rate for 30 successive boiler operating days. A separate performance tests is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for SO2 and a new percent reduction for SO2 are calculated to show compliance with the standards (40 CFR 60.48Da(e)) . Compliance shall be demonstrated by following the procedures in 40 CFR 60.48Da(g) and (h)).

[7] For bituminous coal. Limit for subbituminous coal is 0.50 lb/MMBtu, limit for oil is 0.30 lb/MMBtu, limit for gas is 0.20 lb/MMBtu, and for other fuel types, or if two or more fuels are combusted simultaneously, the NOx BACT limit shall be the limit specified in 40 CFR 60.44Da(a) and/or as determined by the proration procedures specified in 40 CFR 60.44a(c). Standard is a 30-day rolling average. This standard applies at all times except during periods of startup, shutdown or malfunction (40 CFR 60.48Da(c)). After the initial performance test, compliance with the NOx emission limitations under 60.44Da is based on the average emission rate for 30 successive boiler operating days. A separate performance tests is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for NOx are calculated to show compliance with the standards (40 CFR 60.48Da(e)) . Compliance shall be demonstrated by following the procedures in 40 CFR 60.48Da(g) and (h).

[8] For solid fuels. For liquid fuels, standard is a 30% reduction of potential combustion concentration. Compliance with the lb/MMBtu standard constitutes compliance with the percent reduction requirements (40 CFR 60.48a(b)).

[9] As requested to remain an insignificant increase for PSD and to meet Acid Rain requirements in 40 CFR 76.6. Standard is a twelve month rolling average, and includes startup, shutdown and malfunctions. To allow for a shakedown period for the combustion optimization system, this standard becomes effective 90 boiler operating days after installation of the overfire air, or July 21, 2008, whichever comes first.

[10] Limit used for modeling an insignificant impact for NAAQS and increment in project 07-355.

[11] Standard also requires 1% potential combustion concentration (99% reduction) when combusting solid fuel, and 30% potential combustion concentration (70% reduction) when combusting liquid fuel (40 CFR 60.42Da(a)). Compliance with the 0.03 lb/MMBtu standard constitutes compliance with the percent reduction requirements (40 CFR 60.48Da(a)). This standard applies at all times except during periods of startup, shutdown or malfunction (40 CFR 60.48Da(c)).

11. Emission Point Characteristics

This emission point shall conform to the specifications listed below:

Parameter	Value
Stack Height, (ft, from the ground)	300 Feet
Discharge Style	Vertical, unobstructed
Stack Opening, (inches, dia.)	126 inches
Exhaust Temperature (°F)	180°F
Exhaust Flowrate (scfm)	430,625 scfm

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
$PM_{2.5}$	Yes[1]	No	Test	NA
Opacity	Yes[2]	Yes	COMS	Continuous
SO_2	Yes[3]	Yes	CEMS	Continuous
NO_X	Yes[3]	Yes	CEMS	Continuous
VOC	No	No	NA	NA
CO	Yes[4]	Yes	CEMS	Continuous
Pb	No	No	NA	NA
HAP	No	No	NA	NA

[1] Stack test for $PM_{2.5}$ is required if the results of any PM test (as a 3 run average) ever exceeds 43.59 pounds per hour. The test stack for PM2.5 shall be conducted within ninety (90) days after the report is received by the Iowa DNR showing the final results of the PM test.
[2] Initial compliance testing completed July 1997. Further initial testing not required at this time.
[3] Initial compliance testing completed August 26, 1994. Further initial testing not required at this time.
[4] Initial compliance testing required by project 07-355 has been completed.

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	40 CFR 60, Appendix A, Method 5 40 CFR 51 Appendix M, Method 202
PM_{10}	1 hour	40 CFR 51, Appendix M, 201A with 202
$PM_{2.5}$	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. This unit is subject to the NSPS standard Subpart Da, *Standards of Performance for Electric Utility Steam Generating Unit for which Construction is Commenced After September 18, 1978.*

B. For information only: This equipment is of the source category affected by the following federal regulation: National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (MATS)[40 CFR Part 63, Subpart UUUUU].

C. This unit is considered an affected source under 40 CFR 72, 73, 75, 76, 77 and 78 definitions. Therefore, this emission unit is subject to the applicable provisions of the Acid Rain Program.

14. Operating Limits

Operating limits for these emission units shall be:

A. The owner or operator shall, to the extent practicable, maintain and operate the unit in a manner consistent with good air pollution control practice for minimizing emissions at all times, including periods of startup, shutdown and malfunction.

B. The unit shall only combust coal and/or fuel oil in this unit.

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. These records shall show the following:

A. The owner or operator shall monitor emissions from this unit and calculate the annual emissions, in tons per year on a calendar-year basis, for a period of five years following resumption of regular operations after the change made in this project (07-355). This information shall be retained by the owner or operator for a period of ten years after the project (07-355) is completed (IAC 567 33.3(18)"f"(4)).

B. The owner or operator shall submit a report to the department within 60 days after the end of each year during which records must be generated under 567-IAC 33.3(18)"f" (4) setting out the unit's annual emissions during the calendar year that preceded submission of the report. This shall be for a period of five years following resumption of regular operations (project 07-355). The owner or operator shall notify the DNR if the combined total annual emissions of Boiler 8 and Boiler 9, in tons per year, exceed any of the following:

1. Particulate Matter (PM) – 327.12 tpy
2. Particulate Matter less than 10 microns (PM10) – 317.12 tpy
3. Sulfur Dioxide (SO2) – 3,633.45 tpy
4. Nitrogen Oxides (NOx) – 4,620.17 tpy
5. Volatile Organic Compounds (VOC) – 80.46 tpy

C. The owner or operator shall make the information required to be documented and maintained pursuant to IAC 567-33.3(18)"f" available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567-22.107(6).

D. The owner or operator shall maintain a file of computations to show the total hourly emission level for SO2. The owner shall submit quarterly excess emission reports as specified in IAC 567-25.1(6).

16. Continuous Emission Monitoring

General Requirements –
The owner or operator shall operate, maintain, and quality assure a continuous emission monitoring system (CEMS) for measuring emissions in the respective units (ppm, lb/hr, etc) as required in Condition 10a or 10b. The CEMS shall consist of continuous emission monitors, exhaust flow equipment, and data acquisition and handling systems (DAHS) meeting the design and performance specifications found in 40 CFR Part 75. The CEMS shall be operated during any period that any fuel is combusted in the boilers.

In conformance with the Acid Rain Program, the owner or operator shall perform all quality assurance activities at the frequencies described in 40 CFR Part 75, Appendix B. Any calibration gases used to conduct quality assurance activities shall meet the traceability protocol requirements of 40 CFR 75, Appendix H. The operational specifications, ongoing system calibration/quality assurance, and recordkeeping for the CEMS shall be done in accordance with 40 CFR Part 75.

The owner or operator shall also follow all applicable continuous emission monitoring requirements of 40 CFR Part 60, Subpart Da. 40 CFR 60, Appendix F (Quality Assurance Procedures) requirements shall apply where applicable, and be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

Opacity Requirements –
The owner or operator shall install, calibrate, maintain and operate a COMS for measuring opacity, and record the output of the system, as required in 40 CFR 60.49Da(a). The system shall be designed to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1 (PS1). The operational specifications, ongoing system calibration/quality assurance, and reporting and recordkeeping for the COMS shall be done in accordance with 40 CFR Part 60.

Sulfur Dioxide Requirements -
The owner or operator shall install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide (SO_2), and record the output of the system, as required in 40 CFR 60.49Da(b). The system shall be designed to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6).

The owner or operator shall periodically review the aggregate hourly emissions average and aggregate annual emissions data produced by the CEMS. If the review indicates that either may exceed the emission limitations found in Condition 10, the owner or operator shall take steps to mitigate SO_2 emissions to, at, or below the applicable limitation.

The owner or operator shall maintain an on-site record of CEMS-related data for not less than two years from the origination. The record shall contain all hourly SO_2 and flow rate measurements, any missing data substitution, subsequent aggregate and averaging calculation, results of quality assurance and averaging calculations, results of quality assurance activities, and all performance test results. These records shall be made readily available for inspection by the IDNR, EPA, or any authorized agent of these agencies.

Nitrogen Oxide Requirements -
The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxide (NOx), and record the output of the system, as required in 40 CFR 60.49Da(c). The system shall be designed to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6).

Carbon Monoxide Requirements -
The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide (CO), and record the output of the system. The system shall be designed to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4A (PS4A) and Performance Specification 6 (PS6). The specifications of 40 CFR Part 75, Appendix F (Quality Assurance/Quality Control) shall apply.

The owner or operator shall account for any missing CO data periods using a procedure similar to that outlined in 40 CFR Part 75, Subpart D for SO_2. Missing data shall be evaluated separately for each component of a CEMS and include any period of time during boiler operation for which a CEMS component has not operated or otherwise is not able to provide quality assured data.

40 CFR Part 75, Appendix B, defines the procedures for determining whether data are valid or out of control.

17. Description of Terms and Acronyms

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

EPA Rulemakings

CFR: 40 C.F.R. 52.820(d)
FRM: 79 FR 71025 (12/1/2014) and 80 FR 18133 (4/3/15)
PRM: 79 FR 46742 (8/11/2014) and 80 FR 18179 (4/3/15)
State Submission: 2/18/14 and 11/3/14
State Final: 2/14/14 ACO; permits are individually dated
APDB File: EPA-R07-OAR-2014-0550 and EPA-R07-OAR-2015-0159; IA-167 and IA-167a
Description: IA-167 EPA-R07-OAR-2014-0550, and IA 167a EPA-R07-OAR-2015-0159.
Description: This action approves Iowa's State Implementation Plan to address the 2011 SIP Call for the 2006 24-hour PM2.5 NAAQS for the Muscatine County, Iowa area. The state's plan addresses the requirements of the SIP Call and includes into the SIP permits for Muscatine Power and Water and Union Tank Car. It also includes an Administrative Consent Order for Grain Processing Corporation. IA 167 published December 1, 2014 approved new permits (29)-(109), codified in 52.820(d), IA 167a updates and revises the previously approved permits for administrative errors and approves the updated versions of the permits that were not available when IA-167 was published.

Difference Between the State and EPA-Approved Regulation:

(29)Grain Processing Corporation, Administrative Consent Order NO.2014-AQ-A1, the last sentence of Paragraph 5, Section III and Section VI are not approved by EPA as part of the SIP.