

AIR QUALITY CONSTRUCTION PERMIT

PREVENTION OF SIGNIFICANT DETERIORATION

PERMIT NUMBER: CP09-001

Facility Name: Omaha Public Power District –
Nebraska City Station

NDEQ Facility ID#: 58343

Mailing Address:
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Facility Location:
7264 L Road
Nebraska City, Otoe County, Nebraska 68410

Standard Industrial Classification (SIC) Code: 4911 (fossil-fueled electric generators); the North American Industry Classification System (NAICS) code is 221112

SIGNIFICANT PERMIT REVISION to permit: CP07-0068 issued March 6, 2008

This construction permit supersedes Specific Permit Conditions XIII.(A) Table 1, XIII.(C) Table 3, XIII.(D) Table 4, XIII.(F)(1) and (6) and Table 5, and XIII.(G)(1) of construction permit CP07-0068. No other terms or conditions of permit CP07-0068 are being revised or otherwise modified by this document. All other provisions of the original permit are still in effect, and in concert with this permit revision, constitute the effective construction permit.

This construction permit approves the proposed revisions of air quality construction permit CP07-0068 as identified in the air quality construction permit application #09-001 received January 26, 2009, including any supporting information received prior to issuance of this permit. Additional details of the proposed project, including estimated pollutant emissions caused by the project, can be found in the accompanying Fact Sheet.

Pursuant to Chapter 14 of the Nebraska Air Quality regulations, the public has been notified by prominent advertisement of this significant permit revision and the thirty (30) day period allowed for comments has elapsed.

The undersigned issues this permit on behalf of the Director under the authority of Title 129 – Nebraska Air Quality Regulations as amended May 17, 2009.

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Date

Shelley Kaderly, Air Administrator
Air Quality Division

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SPECIFIC CONDITIONS

XIII. (A)

TABLE 1

Emission Point	Emission Unit / Equipment ID	Nominal Size / Capacity
201	Unit 2 Boiler (20-1)	6,478 MMBtu/hr
202	SDA Lime Storage East Exhaust (24-1)	700 acfm
203	SDA Lime Storage West Exhaust (24-2)	700 acfm
204	Fly Ash Waste Storage Bin Vent (23-1)	7,800 acfm
207	Emergency Generator (22-1)	1,837-horsepower
208	Cooling Tower 18-cell (26-1)	335,000 gallons/min
209	Auxiliary Boiler 2 (21-1)	142.7 MMBtu/hr
215	Activated Carbon (Hg control) Silo Exhaust (27-1)	2,000 acfm
216	Silo A Tripper Dust Transfer Clean Air Vent (28-1)	475 acfm
217	Silo B Tripper Dust Transfer Clean Air Vent (28-2)	475 acfm

XIII.(B) Operational and Fuel Limitations:

- (4) Operation of the Unit 2 baghouse (emission point 201) shall be in accordance with the following requirements:
 - (a) The baghouse shall be operated at all times the associated emissions unit is combusting coal (excluding times during startup when bypass is necessary to prevent equipment damage) and shall be equipped with an operational pressure differential indicator and bag leak detection system.

XIII. (C)

TABLE 3

Emission Point	Emission Unit / Equipment ID	Minimum Stack Height (ft)	Stack Exit Point Maximum Inside Diameter (ft)
201	Unit 2 Boiler (20-1)	400	22.5
209	Auxiliary Boiler 2 (21-1)	65	3.46
207	Emergency Generator (22-1)	15' 10"	1.17

XIII.(D) Emission Limitations:

- (1) The permittee shall not cause the discharge of air contaminants into the atmosphere in excess of the amounts listed in Table 4. {Title 129, Chapters 4, 19, and 27}

TABLE 4

Emission Point	Emission Unit (ID)	Emission Limit	Comments
105	Tripper dust collector (9-1)	PM: 0.01 grains/dscf	test method average ^a
106	Tripper dust collector (9-2)	PM: 0.01 grains/dscf	test method average
109	Crusher dust collector (8-1)	PM: 0.00826 grains/dscf	test method average
110	Crusher dust collector (8-2)	PM: 0.00826 grains/dscf	test method average
201	Unit 2 Boiler (20-1)	PM: 0.018 lb/MMBtu ^b	test method average
		Filterable PM: 0.015 lb/MMBtu ^{c, g}	test method average
		SO ₂ : 0.095 lb/MMBtu ^c	30-day rolling average
		SO ₂ : 0.163 lb/MMBtu	24-hr rolling average
		SO ₂ : 0.48 lb/MMBtu	3-hour rolling average
		SO ₂ : 1.4 lb/MWhr ^h	30-day rolling average
		NO _x : 0.07 lb/MMBtu ^d	30-day rolling average
		NO _x : 1.0 lb/MWh ^{c, h}	30-day rolling average
		CO: 0.16 lb/MMBtu	3-hour rolling average
		VOC: 0.0034 lb/MMBtu	test method average
		H ₂ SO ₄ : 0.0042 lb/MMBtu	test method average
HCl: 0.0008 lb/MMBtu	test method average		
Fluorides: 0.0004 lb/MMBtu ^e	test method average		
Hg: 18 x 10 ⁻⁶ lb/MWhr ^f	12-month rolling ave.		
202	SDA Lime Storage Exhaust - West (24-1)	PM: 0.01 grains/dscf	test method average
203	SDA Lime Storage Exhaust - East (24-2)	PM: 0.01 grains/dscf	test method average
204	Fly Ash Waste Storage Vent (23-1)	PM: 0.01 grains/dscf	test method average

^a Test method average is the average of three (3) test runs (typical for all)

^b PM limit includes filterable plus condensable particulate matter

^c Emission limit does not apply during periods of startup, shutdown, or malfunction

^d Refer to Condition XIII.(D)(2)

^e Fluorides, measured as hydrogen fluoride (HF)

^f Based on gross energy output. This permit limit is based on a case-by-case MACT determination. It is subject to revision in the event of a final federal MACT standard for mercury.

^g Filterable PM; Heat input value derived from combustion of solid fuel such as coal

^h On a gross energy output basis.

XIII.(F) Testing Requirements:

- (1) Initial performance tests shall be conducted and the results submitted to demonstrate compliance with the applicable conditions and limitations in this permit within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup. Refer to Table 5 for a summary of initial performance testing requirements. Testing or monitoring methods other than those listed in Table 5 may be used upon approval of the Department.
- (6) Performance testing for compliance with the 12-month rolling average limit on mercury (Hg) shall be completed using an EPA-approved CEMS, or an EPA-approved continuous measurement sampling method, or an alternative monitoring method upon approval of the Department.

TABLE 5 – Initial Performance Testing Summary

Emission Point(s)	Emission Unit (ID)	Initial Performance Testing Requirements / Demonstration Method	
105, 106	Tripper Dust Collectors (9-1, 9-2)	PM: Opacity:	Method 5 (filterable PM only) Method 9 (per NSPS Subpart Y)
109, 110	Crusher Dust Collectors (8-1, 8-2)	PM:	Method 5 (filterable PM only)
201	Unit 2 Boiler (20-1)	PM: SO ₂ : NO _x : CO: VOC: Fluorides: H ₂ SO ₄ : HCl: Hg: Opacity:	Method 5 & Method 202 (condensables) CEMS ^a {40CFR60.50a(c)(5)} or Method 19 CEMS ^a {40CFR60.50a(d)(2)} CEMS ^a or Method 10 Method 25 or 25A Method 26 or 26A, also report fluorine ppm in coal Method 8 or 8A, also report SO ₂ rate during this test Method 26 or 26A, also report chlorine ppm in coal CEMS or test method, see Condition XIII.(F)(6) Method 9 or COMS ^a {40CFR60.11(b)}
202, 203, and 204	Baghouses	PM: Opacity:	Method 5 (filterable PM only) Method 9
215	Baghouse	Opacity:	Method 9
209	Auxiliary Boiler 2 (21-1)	Opacity: SO ₂ :	Method 9 or COMS ^a {40CFR60.11(b)} Use initial fuel supplier certifications
207	Emergency Generator (22-1)	Opacity:	Method 9 at 100% load

^a refer to Condition XIII.(G)(1)

(G) Monitoring Requirements:

- (1) Continuous Emission Monitoring System (CEMS) / Continuous Opacity Monitoring System (COMS) Requirements: The permittee shall install and operate a CEMS/COMS to measure and record Opacity, outlet SO₂, NO_x, CO and CO₂ emissions from the Unit 2 boiler stack (201) and Opacity from the auxiliary boiler 2 stack (209). The monitoring system shall be used for measuring and demonstrating compliance with the appropriate Opacity, SO₂, NO_x, and CO emission limitations. CEMS/COMS availability and missing data will be handled in accordance with 40 CFR Part 60.47a(e), 60.47a(f), and 60.13 as applicable.

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FACT SHEET

OPPD-Nebraska City Station
7264 L Road
Nebraska City, Nebraska 68410

October 27, 2009

DESCRIPTION OF THE FACILITY OR ACTIVITY:

Omaha Public Power District (OPPD) operates the Nebraska City Station (NCS), including Unit 2 (NC2), and is requesting an additional revision of their NC2 construction permit, the original having been issued on March 9, 2005, with subsequent revisions issued on October 26, 2006 and March 6, 2008.

For a description of OPPD operations at this site, please see the factsheets for this facility dated March 9, 2005; October 26, 2006; and March 6, 2008. The Standard Industrial Classification (SIC) code for Unit 2 is 4911, and the North American Industry Classification System (NAICS) code is 221112 for fossil-fueled electric generators.

This revision will consist of the following items:

1. adjustment of the estimated emission stack dimensions to the as-built dimensions
2. modification of the approved analytical test methods regarding mercury, volatile organic compounds (VOCs), fluorides, sulfuric acid (H₂SO₄), and hydrochloric acid (HCL)
3. elimination of the current provision for sampling of SO₂ at the inlet of the SO₂ control device (scrubber)
4. allowance for bypass of the Unit 2 baghouse during startup of the Unit 2 boiler
5. inclusion of two tripper dust transfer clean air vents, associated with coal silos A and B.

Permit History

For past permit history, please see the factsheets dated October 26, 2006; and March 6, 2008. A new construction permit application for Unit 2 was received on January 26, 2009, concerning proposed changes to stack dimensions and testing methods. This was augmented on March 16, 2009, requesting elimination of sampling at the inlet of the SO₂ scrubber. It was augmented again on June 24, 2009, requesting bypass of the Unit 2 baghouse during startup and any malfunctions, since otherwise the bags would foul with fuel oil residue, and also requesting inclusion of two clean air vents associated with coal silos A and B.

TYPE AND QUANTITY OF AIR CONTAMINANT EMISSIONS ANTICIPATED:

No additional air contaminant emissions are anticipated as a result of the proposed permitting action. Even though the Unit 2 baghouse permit language has been revised to allow bypass of the baghouse during startups, the applicable PM emissions limit does not have this exclusion and is still required to be met at all times.

The two additional emission points are minor sources associated with coal silo A and silo B called "Tripper Dust Transfer Clean Air Vents", which are controlled by cyclones, and are in use when Unit 1 is offline and Unit 2 continues to be on line. These dust collectors are used to clean pneumatic transfer air used to move dust collected in the Tripper Dust Collector hoppers over to the Unit 2 coal silos when Unit 1 is not running. When Unit 1 is on-line, the tripper dust falls by gravity into the Unit 1 coal silos. When

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Unit 1 is down, the coal silos need to be emptied to eliminate any combustion hazard – hence the need to route this material to the Unit 2 coal silos. The coal dust produced here is largely a product of coal crushing that takes place upstream of the trippers. The emissions estimate is based on primary taconite ore crushing controlled by a cyclone, which lists a total PM emission factor of 0.25 lb/ton (AP-42, Table 11.23-3). The maximum transfer rate is 10,000 lb/hr or 5 tons/hr. Thus, the estimated maximum short-term emission rate is $0.25 \times 5 = 1.25$ lb/hr. If this source operated full-time, its annual potential would be approximately 5.5 TPY. Because Unit 1 is typically on-line for approximately 90% of the time, actual annual emissions are estimated at around 0.55 TPY. However, when this source is emitting, all Unit 1 emissions sources (main stack, ash handling, etc.), with far greater emissions, would not be emitting particulate matter. Thus, this minor source does not increase the potential-to-emit of the facility. When this source is operating, it represents an alternative emissions scenario with far less emissions than when both generating units are on-line. The vents are approximately 165 feet above ground, so they should not present any significant ambient air concern.

APPLICABLE REQUIREMENTS AND VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS:

Title 129, Chapter 4 -National Ambient Air Quality Standards (NAAQS)

NAAQS modeling was not required because the requested changes to the permit are insignificant; however a screening analysis was performed to determine the impact of the as-built stack height and diameter for the Emergency Generator. The analysis showed that the change to the Emergency Generator stack (shorter stack height) has an insignificant impact to modeled concentrations.

Title 129, Chapter 15 – Permit Revisions; Re-opening for Cause

In accordance with Section 005, this proposed revision is classified as a significant permit revision and must follow the normal administrative procedures for public notice. Since facility-wide emissions are greater than 100 tpy, a \$3,000 permit application fee is required in accordance with Chapter 17, Section 003. This revision is “significant” because it includes a change (removal) of an emission limit for the Activated Carbon Silo Exhaust (EP 215). The opacity limit for this emissions point is kept, but the grains/dscf limit is deleted. This also means a deletion of testing, reporting, and recordkeeping requirements with respect to this emission limit for this emission point. Title 129, Chapter 15, Section 005.01A states “Any relaxation in existing monitoring, reporting, or recordkeeping shall be considered significant.”

Title 129, Chapter 18 - New Source Performance Standards (NSPS)

This permitting action is partially motivated by changes in NSPS regulations promulgated on June 13, 2007: 40CFR 60.42 Da, 43 Da, 44 Da, 49 Da, and 50 Da. The 2007 changes pertain to facilities constructed, reconstructed or modified after February 28, 2005. This source was constructed beginning in September, 2005, thus after the date specified in the regulation.

40CFR 60.42 Da concerns filterable particulate matter (PM) emissions. §60.42Da(c) was added to the subpart in 2007, which changed the emission limit to 6.4 ng/J (0.015 lb/MMBtu) heat input derived from the combustion of solid fuel such as coal.

40CFR 60.43Da concerns sulfur dioxide (SO₂) emission limits. §60.43Da(i)(1) was added to the subpart in 2007, which changed the emission limit to 180 ng/J (1.4 lb/MWh) gross energy output on a 30-day rolling average basis.

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40CFR 60.44 Da concerns nitrogen oxide (NO_x) emission limits. §60.44Da(e)(1) was added to the subpart in 2007, which changed the emission limit to include a limitation on emissions of 130 ng/J (1.0 lb/MWhr) gross energy output on a 30-day rolling average basis.

40CFR 60.49 Da(b) concerns continuous emission monitoring systems (CEMS) for SO₂. (Prior to the 2007 changes, the citation for this regulations was 40CFR 60.47a(b).) The facility has chosen to use a CEMS only on the outlet of an SO₂ control device, because the facility chose the lbs/MWh limitation for SO₂, instead of the percent emission reduction option from §60.43Da(i)(1).

40CFR 60.50 Da concerns compliance determination methods. (Prior to the 2007 changes, the citation for this regulations was 40CFR 60.48a.) The permit has been changed to specify that filterable PM be evaluated. Filterable PM testing is to be done as the average of three measurements.

Title 129, Chapter 19 - Prevention of Significant Deterioration (PSD)

This facility is already a major stationary source under the PSD program (>100 tpy) as a result of analyses performed on auxiliary boiler 2 and the consequent issuance of a PSD Construction Permit on March 9, 2005. This permitting action does not further increase any potential emissions of PM, PM₁₀, SO₂, NO_x, CO or VOC.

Title 129, Chapter 20 – Particulate Emissions: Limitations and Standards

The source is expected to be in compliance with all Title 129, Chapter 20 requirements. A more detailed discussion of why compliance is expected can be found in the original permit's fact sheet.

Title 129, Chapter 24 - Sulfur Compound Emissions

The source is expected to be in compliance with the Title 129, Chapter 24 requirements. A more detailed discussion of why compliance is expected can be found in the original permit's fact sheet

Title 129, Chapter 27, Section 002 - Best Available Control Technology

This permitting action does not subject the facility to any additional BACT requirements.

Title 129, Chapter 27, Section 003 -Maximum Achievable Control Technology

This permitting action does not subject the facility to any additional MACT requirements.

Title 129, Chapter 28 -National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 63)

This permitting action does not subject the facility to any additional NESHAP requirements.

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Proposed changes to specific permit requirements under Specific Conditions XIII. of construction permit CP07-0068 (dated March 6, 2008) are discussed as follows:

Revisions to the original conditions have been identified in the following ways; added items are **bold and underlined**, while removed items have a ~~strike through~~. The description of changes to the permit conditions are in italics.

Permit conditions specific to the proposed permit are discussed as follows:

XIII. SPECIFIC CONDITIONS

- (A) This permit allows for the discharge of air contaminants from the installation (construction) of the equipment listed in Table 1. This equipment is collectively referred to as NCS Unit 2. This permit also approves the modification of the existing coal conveyer/tripper system (Emission points 105 and 106) {Title 129, Chapters 17 and 19}

TABLE 1

Emission Point	Emission Unit / Equipment ID	Nominal Size / Capacity
201	Unit 2 Boiler (20-1)	6,478 MMBtu/hr
202	SDA Lime Storage East Exhaust (24-1)	700 acfm
203	SDA Lime Storage West Exhaust (24-2)	700 acfm
204	Fly Ash Waste Storage Bin Vent (23-1)	7,800 acfm
207	Emergency Generator (22-1)	1,837-horsepower
208	Cooling Tower 18-cell (26-1)	335,000 gallons/min
209	Auxiliary Boiler 2 (21-1)	142.7 MMBtu/hr
215	Activated Carbon (Hg control) Silo Exhaust (27-1)	2,000 acfm
<u>216</u>	<u>Silo A Tripper Dust Transfer Clean Air Vent (28-1)</u>	<u>475 acfm</u>
<u>217</u>	<u>Silo B Tripper Dust Transfer Clean Air Vent (28-2)</u>	<u>475 acfm</u>

EP 216/217: When NCI is out of service, a single blower moves dust collected by the tripper baghouses to one of the NC2 Silo A or B cyclones, which separate the dust from the transfer air, and each have their own vent. Thus, only one of the EP216 or EP217 units can be active at any given time. These cyclones do not operate when NCI is in service, as the collected dust then drops by gravity into the NCI coal silos.

(B) Operational and Fuel Limitations:

- (4) Operation of the Unit 2 baghouse (emission point 201) shall be in accordance with the following requirements:
- (a) The baghouse shall be operated at all times the associated emissions unit is combusting coal (**excluding times during startup when bypass is necessary to prevent equipment damage**) and shall be equipped with an operational pressure differential indicator and bag leak detection system.

Normal startup requires a period of time where oil igniters are in being fired along with initiation of coal combustion. As coal combustion ramps up, the igniters are turned off and the baghouse bypass is closed

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to put the baghouse in service. The baghouse cannot be used when oil igniters are firing because the oil combustion residue would coat the bags and make them unusable. Since the PM emission limit is still applicable to the Unit 2 boiler, any excess emissions expected due to bypass of the baghouse for any reason such as startup or malfunctions should be handled in accordance with Title 129, Chapter 35.

- (C) Stack Dimensions: Final stack parameters shall meet the following dimensions as listed in Table 3. Within 180 days after construction of this project is completed, the permittee shall determine the actual stack exit point dimensions. {Title 129, Chapters 4 and 19}

TABLE 3

Emission Point	Emission Unit / Equipment ID	Minimum Stack Height (ft)	Stack Exit Point Maximum Inside Diameter (ft)
201	Unit 2 Boiler (20-1)	400	23.0 22.5
209	Auxiliary Boiler 2 (21-1)	65	3.5 3.46
207	Emergency Generator (22-1)	27 15' 10"	4.33 1.17

OPPD has certified that the replacement values given in the table are "Actual Installed Values". A screening analysis was performed to determine the impact of the as-built stack height and diameter for the Emergency Generator. The analysis showed that the changes to the Emergency Generator stack will not significantly impact the surrounding air quality. The other stack as-built dimensions do not deviate significantly from the original submittal.

- (D) Emission Limitations:
- (1) The permittee shall not cause the discharge of air contaminants into the atmosphere in excess of the amounts listed in Table 4. {Title 129, Chapters 4, 19, and 27}

TABLE 4

Emission Point	Emission Unit (ID)	Emission Limit	Comments
105	Tripper dust collector (9-1)	PM: 0.01 grains/dscf	test method average ^a
106	Tripper dust collector (9-2)	PM: 0.01 grains/dscf	test method average
109	Crusher dust collector (8-1)	PM: 0.00826 grains/dscf	test method average
110	Crusher dust collector (8-2)	PM: 0.00826 grains/dscf	test method average
201	Unit 2 Boiler (20-1)	PM: 0.018 lb/MMBtu ^b	test method average
		<u>Filterable PM: 0.015 lb/MMBtu</u> ^{c, g}	<u>test method average</u>
		SO ₂ : 0.095 lb/MMBtu ^c	30-day rolling average
		SO ₂ : 0.163 lb/MMBtu	24-hr rolling average
		SO ₂ : 0.48 lb/MMBtu	3-hour rolling average
		<u>SO₂: 1.4 lb/MWhr</u> ^h	<u>30-day rolling average</u>
		NO _x : 0.07 lb/MMBtu ^d	30-day rolling average
		<u>NO_x: 1.0 lb/MWhr</u> ^{c, h}	<u>30-day rolling average</u>
		CO: 0.16 lb/MMBtu	3-hour rolling average

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TABLE 4

Emission Point	Emission Unit (ID)	Emission Limit	Comments
		VOC: 0.0034 lb/MMBtu	test method average
		H ₂ SO ₄ : 0.0042 lb/MMBtu	test method average
		HCl: 0.0008 lb/MMBtu	test method average
		Fluorides: 0.0004 lb/MMBtu ^e	test method average
		Hg: 18 x 10 ⁻⁶ lb/MWhr ^f	12-month rolling ave.
202	SDA Lime Storage Exhaust – West (24-1)	PM: 0.01 grains/dscf	test method average
203	SDA Lime Storage Exhaust – East (24-2)	PM: 0.01 grains/dscf	test method average
204	Fly Ash Waste Storage Vent (23-1)	PM: 0.01 grains/dscf	test method average
215	Activated Carbon Silo Exhaust (27-1)	PM: 0.01 grains/dscf	test method average

^a Test method average is the average of three (3) test runs (typical for all)

^b PM limit includes filterable plus condensable particulate matter

^c Emission limit does not apply during periods of startup, shutdown, or malfunction

^d Refer to Condition XIII.(D)(2)

^e Fluorides, measured as hydrogen fluoride (HF)

^f Based on gross energy output. This permit limit is based on a case-by-case MACT determination. It is subject to revision in the event of a final federal MACT standard for mercury.

^g **Filterable PM; Heat input value derived from combustion of solid fuel such as coal**

^h **On a gross energy output basis.**

The filterable PM emission limit of 0.015 lb/MMBtu is derived from changes to 40 CFR 60.42Da to include a limitation on emissions derived from combustion of coal, the limit being in the form of heat input and the result of test method averaging, and of changes to 40 CFR 60.50Da, concerning compliance determination methods, and that Method 5 applies to filterable PM and that its results are the average of three test runs averaged to determine compliance with the limit. As provided in 40 CFR 60.48Da(c), this filterable PM emission limit does not apply during periods of startup, shutdown, and malfunction.

The SO₂ emission limit of 1.4 lb/MWhr is being added to the permit to reflect recent changes in 40CFR 60.43 Da. This limit is based on a gross energy output and is applied on a 30-day rolling average basis, with no exclusions for startup, shutdown and malfunction conditions.

The NO_x emission limit of 1.0 lb/MWhr is being added to the permit to reflect recent changes in 40CFR 60.44 Da. This limit is based on a gross energy output and is applied on a 30-day rolling average basis, and allows exclusions for startup, shutdown and malfunction conditions.

The facility requested that the Table 4 reference to EP 215 (Activated Carbon Silo Exhaust) be eliminated, thus removing the grains/dscf limit. Emissions compliance testing of the Activated Carbon Silo Exhaust (Emission Point 215) has proven problematic because air flows are sometimes too low to meet testing needs. This silo is relatively small and does not have its own exhaust fan but relies upon pneumatic blower fans installed on the activated carbon delivery trucks. The control device is a bin vent filter with passive exhaust to the atmosphere as carbon and transfer air are blown into the silo.

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(F) Testing Requirements:

- (1) Initial performance tests shall be conducted and the results submitted to demonstrate compliance with the applicable conditions and limitations in this permit within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup. Refer to Table 5 for a summary of initial performance testing requirements. **Testing or monitoring methods other than those listed in Table 5 may be used upon approval of the Department.**

- (6) Performance testing for compliance with the 12-month rolling average limit on mercury (Hg) shall be completed using an EPA-approved CEMS, or an EPA-approved continuous measurement sampling method, **or an alternative monitoring method upon approval of the Department.**

On February 8, 2008, the U.S. Court of Appeals for the Second Circuit vacated CAMR. Because federal rules for control and monitoring of mercury emissions are not currently applicable, OPPD requested a change to Section XIII(F)(1) and (6) of the permit to allow Department discretion in specifying a monitoring method.

TABLE 5 – Initial Performance Testing Summary

Emission Point(s)	Emission Unit (ID)	Initial Performance Testing Requirements / Demonstration Method	
105, 106	Tripper Dust Collectors (9-1, 9-2)	PM: Opacity:	Method 5 (filterable PM only) Method 9 (per NSPS Subpart Y)
109, 110	Crusher Dust Collectors (8-1, 8-2)	PM:	Method 5 (filterable PM only)
201	Unit 2 Boiler (20-1)	PM: SO ₂ : NO _x : CO: VOC: Fluorides: H ₂ SO ₄ : HCl: Hg: Opacity:	Method 5 & Method 202 (condensables) CEMS ^a {40CFR60.48a(c)(5)} or Method 19 CEMS ^a {40CFR60.47a(c)(2)} CEMS ^a or Method 10 Method 25 <u>or 25A</u> Method 26 <u>or 26A</u> , also report fluorine ppm in coal Method 8 <u>or 8A</u> , also report SO ₂ rate during this test Method 26 <u>or 26A</u> , also report chlorine ppm in coal CEMS or test method, see Condition XIII.(F)(6) Method 9 or COMS ^a {40CFR60.11(b)}
202, 203, 204 and 215	Baghouses	PM: Opacity:	Method 5 (filterable PM only) Method 9
215	Baghouse	Opacity:	Method 9
209	Auxiliary Boiler 2 (21-1)	Opacity: SO ₂ :	Method 9 or COMS ^a {40CFR60.11(b)} Use initial fuel supplier certifications
207	Emergency Generator (22-1)	Opacity:	Method 9 at 100% load

^a refer to Condition XIII.(G)(1)

The change in the compliance determination test method for VOCs from Method 25 to Method 25A is appropriate because this method is more sensitive to low concentrations, gives an instantaneous

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instrumental response, is less expensive, and is easier to run, reducing administrative burden. According to section 13.1 of Method 25, "The minimum detectable limit of the method has been determined to be 50 parts per million by volume (ppm)." The VOC concentration in the exhaust stream is expected to be well under this minimum detectable limit of Method 25. Method 25A is an instrumental method that conservatively measures all organic compounds in the gas stream, including methane and other compounds not included in the definition of VOC. Method 25A does not list a minimum detection limit.

The change in compliance determination test method for Fluorides and HCl to allow Method 26 or Method 26A is desirable because testing will be applied to samples taken from the waste stream after a scrubber where the additional accuracy of Method 26A may be necessary. Method 26A has been determined to be superior for these circumstances (see Emission Measurement Center Guideline Document "EMTIC Workshop Background Paper for Method 26 and 26A").

Likewise, for H₂SO₄ testing, Method 8A is a more accurate method with a lower detection limit than Method 8. Therefore, to provide the flexibility for increased accuracy, or in case Method 8 is not able to detect the low concentrations of H₂SO₂, the Department is adding the option to use Method 8A as an alternative.

Removal of the compliance determination test method requirement of Method 5 at EP 215 PM is due to problematic results. This small Activated Carbon Silo does not have its own exhaust fan but relies upon pneumatic blower fans installed on the activated carbon delivery trucks. Gradual, episodic silo fillage combined with the historically problematic pneumatic blower fans of the contract delivery trucks has resulted in the determination that this testing is not practical and that opacity testing is adequate alone.

(G) Monitoring Requirements:

- (1) Continuous Emission Monitoring System (CEMS) / Continuous Opacity Monitoring System (COMS) Requirements: The permittee shall install and operate a CEMS/COMS to measure and record Opacity, ~~inlet SO₂~~, outlet SO₂, NO_x, CO and CO₂ emissions from the Unit 2 boiler stack (201) and Opacity from the auxiliary boiler 2 stack (209). The monitoring system shall be used for measuring and demonstrating compliance with the appropriate Opacity, SO₂, NO_x, and CO emission limitations. CEMS/COMS availability and missing data will be handled in accordance with 40 CFR Part 60.47a(e), 60.47a(f), and 60.13 as applicable.

40CFR 60.49 Da has been changed, eliminating the necessity for CEMS use the inlets of SO₂ control devices, if the SO₂ emissions are less than 1.4 lbs/MWh gross energy output, which this unit is required to be less than.

STATUTORY OR REGULATORY PROVISIONS ON WHICH PERMIT REQUIREMENTS ARE BASED:

Applicable regulations: Title 129 - Nebraska Air Quality Regulations as amended May 17, 2009.

PROCEDURES FOR FINAL DETERMINATION WITH RESPECT TO THE PROPOSED CONSTRUCTION PERMIT:

The public notice, as required under NAQR Chapter 14, shall be published on November 3, 2009, in the Nebraska City News-Press newspaper. Persons or groups shall have 30 days from that issuance of public

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notice (December 2, 2009) to provide the NDEQ with any written comments concerning the proposed permit action and/or to request a public hearing, in accordance with NAQR Chapter 14. If a public hearing is granted by the Director, there will be a notice of that meeting published at least 30 days prior to the hearing. Persons having comments or requesting a public hearing may contact:

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

If no public hearing is requested, the permit may be granted at the close of the 30-day comment period. If a public hearing is requested, the Director of the NDEQ may choose to extend the date on which the permit is to be granted until after that public hearing has been held. During the 30-day comment period, persons requiring further information should contact:

Dr. Robert J. Tobin
Air Quality Division-Permitting Section
Nebraska Department of Environmental Quality
PO Box 98922
Lincoln, Nebraska 68509-8922

Telephone inquiries may be made at:

(402) 471-2189

TDD users please call 711 and ask the relay operator to call us at (402) 471-2186.

PUBLIC NOTICE

Nebraska Department of Environmental Quality

Air Quality Division

Notice is given to the public, according to Chapter 14 of Title 129 - Nebraska Air Quality Regulations, of the application of Omaha Public Power District for permission to revise the Prevention of Significant Deterioration (PSD) construction permit for an existing 660-megawatt coal-fired electric generating facility (fossil-fueled electric generators: SIC Code 4911; NAICS Code 221112) located at 7264 L Road in Nebraska City, Otoe County, Nebraska.

No increases in maximum potential emissions of air contaminants are anticipated due to the proposed permit revision.

Otoe County is in attainment in regard to the National Ambient Air Quality Standards (NAAQS) for those pollutants subject to a NAAQS and is expected to continue in that status. No impact is anticipated on habitat for any rare or threatened species.

The Department proposes to issue a construction permit revision with specific conditions, based on Title 129 - Nebraska Air Quality Regulations, which:

- adjust the estimated emission stack dimensions to the as-built dimensions
- modify the approved analytical test methods regarding mercury, volatile organic compounds (VOCs), fluorides, sulfuric acid (H₂SO₄), and hydrochloric acid (HCL)
- eliminate the current provision for sampling of SO₂ at the inlet of the SO₂ control device (scrubber)
- allow for bypass of the Unit 2 baghouse during boiler startup
- include two tripper dust transfer clean air vents, associated with coal silos A and B.

The proposed permit will revise one or more previously issued construction permits. Requirements from previously issued permits may be incorporated into the proposed permit with or without revision. The Department is seeking public comment on all new and revised permit conditions as outlined in the supporting materials.

The proposed permit and supporting materials are available for inspection at the office of the Nebraska Department of Environmental Quality, Suite 400, 1200 "N" Street, Lincoln, Nebraska 68508. These materials were also forwarded to the Morton-James Public Library in Nebraska City. Telephone inquiries may be made at (402) 471-2189. Please notify the Department of Environmental Quality if alternate formats of materials are needed. Contact phone number is (402) 471-2186. TDD users please call 711 and ask the relay operator to call us at (402) 471-2186. Persons requiring further information should contact:

Dr. Robert J. Tobin-Environmental Quality Program Specialist
Air Quality Division-Permitting Section
Nebraska Department of Environmental Quality
PO Box 98922
Lincoln, NE 68509-8922

Within 30 days after the initial publication of this notice, persons may request or petition the Director for public hearing, or submit comments relative to the issuance of the proposed permit. Comments received during the 30 day public notice period, ending December 2, 2009, will be considered prior to the final decision to issue or to deny the proposed permit. Only those provisions that are being revised by this permit action are open for comment at this time. A request or petition for hearing must state the nature of the issues to be raised and all arguments and factual grounds supporting such position. If a public hearing is granted by the Director, the hearing will be advertised by public notice at least 30 days prior to its occurrence. Comments and requests should be mailed to:

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