REVISED CONSTRUCTION PERMIT

PERMIT NUMBER: CP07-0068

ORIGINAL PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
PERMIT TO MODIFY AN
AIR CONTAMINANT SOURCE

ISSUED ON MARCH 9, 2005
(AMENDED OCTOBER 26, 2006) TO:

Omaha Public Power District
444 South 16th Street
Omaha, Nebraska 68102-2247

FOR THE SPECIFIC CONSTRUCTION OF:

A nominal 660-megawatt coal-fired electric generating unit with supporting equipment
(Nebraska City Unit 2)

TO BE LOCATED AT:

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

IS HEREBY REVISED AS FOLLOWS:

- Delete Recycled Ash Storage emission unit (Emission Point 203, ID #25-1).
- Delete Fly Ash Storage Pneumatic Air Exhauster (EP 211, ID #23-2)
- Revise air flow for Fly Ash Waste Storage Bin Vent (EP 204, ID #23-1)
- Revise air flow for SDA Lime Storage West Exhaust (EP 202, ID #24-1)
- Add a second, identical SDA Lime Storage East Exhaust (EP 203, ID #24-2)
- Increase Emergency Generator (EP 207, ID #22-1) stack height.
- Increase size of Auxiliary Boiler 2 (EP 209, ID #21-1)
- Specify distillate oil as startup/flame stabilization fuel for Unit 2 boiler (EP 201, ID #20-1)
- Allow on-site generated combustible materials to be burned in the Unit 2 boiler

Pursuant to Chapter 14 of the Nebraska Air Quality Regulations, the public has been notified by prominent advertisement of this proposed modification of an air contaminant source and the thirty (30) day period allowed for comments has elapsed. This revised construction permit approves the proposed revisions to the original construction permit issued March 9, 2005 (as amended October 26, 2006) and supersedes the original permit and permit amendment.

Compliance with this permit shall not be a defense to any enforcement action for violation of an ambient air quality standard.

This permit is issued with the following conditions:

General Conditions

I. This permit is not transferable to another source or location. (Title 129, Chapter 17)

II. Holding of this permit does not relieve the owner/operator of the source from the responsibility to comply with all applicable portions of the Nebraska Air Quality Regulations and any other requirements under local, State, or Federal law. (Title 129, Chapter 41)

III. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. If the source wishes to make changes at the facility that will result in change(s) to values, specifications, and/or locations of emission points that were indicated in the permit application (or other supplemental information provided by the applicant and reviewed by the Department in issuance of this permit), the source must receive approval from the Department before the change(s) can be made. In addition, any modification which may result in an adverse change to the air quality impacts predicted by atmospheric dispersion modeling (such as changes in stack parameters or increases in emission rates, potential emissions, or actual emissions) shall have prior approval from the Department. The source shall provide all necessary information to verify that there are no substantive changes affecting the basis upon which this permit was issued. Information may include, but not be limited to, additional engineering, modeling and ambient air quality studies. (Title 129, Chapter 17, Section 006, 007, & 008)

IV. Approval to construct, reconstruct and/or modify the source will become invalid if a continuous program of construction is not commenced within 18 months after the date of issuance of the construction permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time. (Title 129, Chapter 17, Section 012)

V. The owner/operator of the source shall provide a notification to the Department of the date construction, reconstruction, or modification commenced, postmarked no later than 30 days after such date, and of the actual date of initial startup of operation, postmarked within 15 days after such date. (Title 129, Chapter 17, Section 012 & Chapter 7, Section 002.03)

VI. The permittee shall allow the Department, EPA or an authorized representative, upon presentation of credentials to (Title 129, Chapter 8, Section 012.02):

(A) Enter upon the permittee's premises at reasonable times where a source subject to this permit is located, emissions-related activity is conducted or records are kept, for the purpose of ensuring compliance with the permit or applicable requirements;

(B) Have access to and copy, at reasonable times, any records, for the purpose of ensuring compliance with the permit or applicable requirements;

(C) Inspect at reasonable times any facilities, pollution control equipment, including monitoring and air pollution control equipment, practices, or operations, for the purpose of ensuring compliance with the permit or applicable requirements;

(D) Sample or monitor at reasonable times substances or parameters for the purpose of ensuring compliance with the permit or applicable requirements.

VII. Applicable regulations: Title 129 - Nebraska Air Quality Regulations as amended February 6, 2008.

VIII. This permit may contain abbreviations and symbols of units of measure which are defined in 40 CFR Part 60.3. Other abbreviations may include, but are not limited to, the following: American Society for Testing and Materials (ASTM), Best Available Control Technology (BACT), Code of Federal Regulations (CFR), Compilation of Air Pollutant Emission Factors, Volume I, Stationary Point and Area Sources (AP-42), Code of Federal Regulations (CFR), Carbon Monoxide (CO), Construction Permit (CP), Continuous Emissions Monitoring System (CEMS), Continuous Opacity Monitoring System (COMS), Dry Standard Cubic Feet per Minute (dscfm), United States Environmental Protection Agency (EPA), Flue Gas Desulfurization (FGD), Hazardous Air Pollutant (HAP), Hydrogen Sulfide (H_2S), Maximum Achievable Control Technology (MACT), Mega-watt (MW), Million British Thermal Units (MMBtu), National Ambient Air Quality Standards (NAAQS), Nebraska City Station (NCS), New Source Performance Standards (NSPS), Nitrogen Oxides (NO_x), Operating Permit (OP), Particulate Matter (PM), Particulate Matter less than or equal to 10 micrometers (PM_{10}), parts per million (PPM), Prevention of Significant Deterioration (PSD), Selective Catalytic Reduction (SCR), Sulfur Dioxide (SO_2), Total Reduced Sulfur (TRS), Volatile Organic Compounds (VOC).

IX. Open fires are prohibited except as allowed by Title 129, Chapter 30.

X. The source shall not cause or permit fugitive particulate matter to become airborne in such quantities and concentrations that it remains visible in the ambient air beyond the property line. (Title 129, Chapter 32)

XI. Application for review of plans or advice furnished by the Director will not relieve the source of legal compliance with any provision of these regulations, or prevent the Director from enforcing or implementing any provision of these regulations. (Title 129, Chapter 37)

XII. If and when the Director declares an air pollution episode as defined in Title 129, Chapter 38, Sections 003.01B, 003.01C, or 003.01D, the source shall immediately take all required actions listed in Title 129, App. I until the Director declares the air pollution episode terminated.

Specific Conditions

XIII. Specific terms and conditions of this permit:

(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 Exhaust-West (24-1)	700 acfm
203	SDA Lime Storage Exhaust-East (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

(B) Operational and Fuel Limitations:

(1) Limitations on the annual operating hours and allowed fuel combustion for specific NCS Unit 2 equipment are indicated in Table 2. {Title 129, Chapters 4 and 19}

TABLE 2

Equipment / Emission Point	Fuel Type Allowed	Operational Limitation
Unit 2 Boiler (201)	Sub-bituminous coal Distillate fuel oil - during startup and flame stabilization	None
Emergency Generator (207)	Distillate fuel oil with a maximum sulfur content of 0.05 percent (0.05%) by weight	Less than or equal to 500 hours during any period of twelve (12) consecutive months[1]
Aux Boiler 2 (209)	Distillate fuel oil with a maximum sulfur content of 0.05 percent (0.05%) by weight	Less than or equal to 500 hours during any period of twelve (12) consecutive months after Unit 2 Boiler (201) startup[2], except up to 787,524 gallons per twelve (12) consecutive month period (10% capacity factor) in months preceding the month of Unit 2 Boiler (201) startup

[1]At no time during the first 11 months after operation commences shall the sum of all the previous months usage exceed 500 hours.

[2]At no time during the first 11 months after startup of Unit 2 Boiler (201) shall the sum of all usage during these months exceed 500 hours.

(2) Cooling Tower. The Unit 2 multi-cell tower (emission point 208) shall be equipped with high efficiency mist eliminators with a maximum total liquid drift not to exceed 0.0005 percent of circulating water flow. {Title 129, Chapter 19}

(3) Operation of each baghouse (emission points 103, 104A, 104B, 105, 106, 107, 109, 110, 111, 202, 203, 204, and 215) shall be in accordance with the following requirements:

(a) Each baghouse shall be operated at all times associated emission unit is in operation and be equipped with an operational pressure differential indicator.

(b) The baghouses shall be properly installed, operated, and maintained. Manufacturer's instructions, if available, shall be kept on site and readily available to Department representatives.

(c) Routine observations (at least once each day of dust collector operation) shall be conducted to determine whether there are visible emissions from the stack, leaks or noise, atypical pressure differential readings, or other indications which may necessitate corrective action. Corrective action shall be taken immediately if necessary.

(d) Collected waste material from the fabric dust collectors shall be handled, transported, and stored in a manner that ensures compliance with Condition X.

(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 emission unit is combusting coal and shall be equipped with an operational pressure differential indicator and bag leak detection system.

(b) The baghouse shall be properly installed, operated, and maintained. Manufacturer's instructions, if available, shall be kept on site and readily available to Department representatives.

(c) The bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations, and in accordance with the guidance provided in "Fabric Filter Bag Leak Detection Guidance," EPA-454/R-98-015, September 1997.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(ii) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(iii) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor(s) and provide notification when an increase in particulate matter emissions over a preset level is detected. Corrective action shall be taken immediately if necessary.

(d) Routine observations (at least once each day of dust collector operation) shall be conducted to determine whether there are visible emissions from the stack, leaks or noise, atypical pressure differential readings, or other indications that may necessitate corrective action. Corrective action shall be taken immediately if necessary.

(5) As provided for under the Resource Conservation and Recovery Act (RCRA) regulations and Nebraska Solid Waste and Hazardous Waste Regulations, the Unit 2 Boiler (201) may periodically burn various on-site generated materials in de minimis amounts for energy recovery (including but not limited to used oils, boiler cleaning wastes, oil absorbent materials, oil contaminated soils, etc.). A log shall be kept showing the date, quantity, origin, and type of material burned.

(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
209	Auxiliary Boiler 2 (21-1)	65	3.5
207	Emergency Generator (22-1)	27	1.33

(1) Within 10 days after determining the actual stack exit point dimensions, the permittee shall certify in writing to the Department that the exit point dimensions comply with the values of Table 3.

(2) The certification shall contain the actual diameter and height of the stacks as-built. A copy of this certification shall be retained on site and be made available for inspection by the Department upon request.

(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, Chapter 4, 19, and 27}

TABLE 4

Emission Point	Emission Unit (ID)	Emission Limit	Comments

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
		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
		NO_x: 0.07 lb/MMBtu [d]	30-day rolling average
		CO: 0.16 lb/MMBtu	3-hour rolling average
		VOC: 0.0034 lb/MMBtu	test method average
		H_2SO_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: 18×10^{-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.

(2) During the first 18 months following initial startup (demonstration period), the Unit 2 Boiler shall not emit NO_x exceeding 0.12 lb/MMBtu on a 30-day rolling average instead of 0.07 lb/MMBtu as listed in Table 4.

(a) During this demonstration period, the owner or operator shall prepare and demonstrate compliance with a "NO_x Compliance Plan" (Plan), prepared in cooperation with the SCR system manufacturer, installer, and operator. The Plan shall be prepared and submitted to the Department for approval within 90 days following initial startup. The Plan shall outline operating and maintenance practices, system performance characteristics and evaluation methods, and procedures necessary to progress from initial SCR system startup to full permit compliance before the demonstration period expires. A log shall be completed for all activities associated with the "tuning" of the SCR system to show compliance with the Plan. Within 14 months after initial startup, an interim status report shall be submitted to the Department indicating the current SCR system performance and progress toward compliance with the Table 4 emission limit.

(b) If the source does not expect to meet the NO_x emission limits in Table 4 after the 18-month demonstration period has elapsed, an SCR Performance Report shall be submitted to the Department no less than 30 days prior to the end of the demonstration period. This report shall include a performance assessment of the SCR system, documentation to show compliance with the Plan, NO_x CEMS data (including the minimum NO_x emission rate, in lb/MMBtu, that was achieved during the demonstration period), a detailed summary of the NO_x performance achieved at other existing utility boilers burning subbituminous Powder River Basin (PRB) coal, and any other information as necessary to justify why the emission limit can not be achieved.

(c) If the Unit 2 boiler and other similar units burning PRB coal are unable to achieve the NO_x limit in Table 4, the limit may be subject to revision after the opportunity for public comment.

(3) Opacity Limitations.

(a) Opacity from each emission point, except Unit 2 boiler (201) and auxiliary boiler (209), shall not equal or exceed 20 percent pursuant to Title 129, Chapter 20, Section 004 and 40 CFR 60.252(c).

(b) Opacity for the Unit 2 boiler (201) and auxiliary boiler (209) shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity pursuant to 40 CFR 60.42a(b) and 40 CFR 60.43b(f). The opacity standard shall not apply during periods of startup, shutdown, or malfunction, pursuant to 40 CFR 60.46a(c) and 40 CFR 60.43b(g).

(4) Startup, Shutdown, and Malfunction Requirements**:** Any excess emissions resulting from startup, shutdown, or malfunction type conditions shall be addressed in accordance with Nebraska Title 129, Chapter 35. Records shall be kept of such startup, shutdown, and malfunction periods as specified under Condition XIII.(I)(3)(h).

(E) Notification: The permittee shall provide to the Department and EPA Administrator written notification as follows in accordance with 40 CFR 60.7 and 40 CFR 63.9:

(1) A notification of the date construction commenced for all NSPS affected facilities (Unit 2 boiler, auxiliary boiler 2, coal storage/conveying) postmarked no later than 30 days after such date, per 40 CFR 60.7(a)(1).

(2) A notification of the actual date of initial start up of the equipment postmarked within 15 days after such date, per 40 CFR 60.7(a)(3).

(3) Any other notification requirements of 40 CFR 60.7, should they be applicable to the facility.

(4) Notification for the auxiliary boiler 2 in accordance with 40 CFR 63.7506(a)(1).

(5) Notification for the emergency generator in accordance with 40 CFR 63.6590(b).

(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.

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_2SO_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 Method 26, also report fluorine ppm in coal Method 8, also report SO_2 rate during this test Method 26, 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
209	Auxiliary Boiler 2 (21-1)	Opacity: SO_2:	Method 9 or COMS [a] {40CFR60.11(b)} Use initial fuel supplier certifications

TABLE 5 – Initial Performance Testing Summary

Emission Point(s)	Emission Unit (ID)	Initial Performance Testing Requirements / Demonstration Method
207	Emergency Generator (22-1)	Opacity: Method 9 at 100% load

[a] Refer to Condition XIII.(G)(1)
[b] Testing shall be done simultaneously prior to the control devices and at the boiler stack

(2) At least 90 days prior to the date of testing, the permittee shall develop and submit to the Department a formal "Test Protocol". This "Test Protocol" shall include, as a minimum, the following items:

(a) A test plan detailing the methods and procedures that will be used for testing each emissions point;

(b) A test schedule describing the tentative agenda as to when testing will occur;

(c) A description as to how testing will determine compliance with the permit conditions along with a copy of the permit.

(d) A description as to how testing will satisfy multiple requirements shall be submitted in the "Test Protocol" or in a separate correspondence.

(3) Pre-Test Notification: The Department shall be notified in writing at least thirty (30) days prior to the date of testing to allow the Department the option of witnessing these tests.

(4) Test Methods: Testing shall be done in accordance with Nebraska Title 129, Chapter 34 - Emission Sources; Testing; Monitoring, or using alternate test methods as approved in writing by the Department.

(5) Final Test Report: A "Final Report" from emissions performance testing shall contain, as a minimum, the following items:

(a) An executive summary.

(b) A statement as to who is performing the stack testing along with their qualifications and experience in such areas.

(c) A description of the source testing conditions, including but not limited to information for each run including, actual achieved firing rate (i.e. MMBtu/hr), quantity of fuel consumed (scf), heating value of the fuel, ambient conditions, etc.

(d) A description of the source air pollution control equipment parameters.

(e) Copies of all data sheets from all test runs.

(f) A description and explanation of any erroneous data or unusual circumstance(s) and the cause for such situation.

(g) A final conclusion section describing the outcome of the testing.

(h) A copy of the "Final Report" including test results certified by the tester, shall be provided to the Department within forty-five (45) days after the completion of the tests and within the timeframes outlined in Condition XIII.(F)(1).

(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.

(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 SO_2, outlet SO_2, NO_x, CO and CO_2 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, SO_2, 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.

(a) The Opacity, SO_2, NO_x, CO and CO_2 monitoring system shall be installed, certified and operated according to manufacturer's specifications and satisfy the applicable Performance Specifications in 40 CFR 60, Appendix B and the Quality Assurance/Quality Control (QA/QC) procedures in Appendix F. The Opacity, SO_2, NO_x and CO_2 monitoring systems for the Unit 2 boiler shall also meet the applicable requirements of 40 CFR 75.

(b) The CEMS/COMS shall meet the requirements of paragraph (G)(1)(a) prior to being used to satisfy any initial performance testing requirements.

(c) In keeping with 40 CFR 60.47a(c)(2), the missing data or bias adjustment procedures associated with 40 CFR 75 will not be used for the Subpart Da compliance determinations.

(d) Compliance with the SO_2, NO_x, and CO limits found in Table 4, and the opacity limit in Condition XIII.(C)(3)(b) of this permit shall be demonstrated with the CEMS/COMS.

(e) Alternative opacity monitoring requirements (instead of a COMS) may be utilized for the auxiliary boiler 2 stack upon written approval by EPA, in accordance with 40 CFR 60.13(i)(2).

(H) Reporting Requirements:

(1) The NOx Compliance plan as required in Condition XIII.(D)(2) shall be submitted within 90 days after initial startup of the Unit 2 boiler. The interim status report of SCR system performance shall be submitted no later than 14 months after initial startup. The SCR Performance Report, if required, shall be submitted no later than 30 days prior to expiration of the 18 month NOx demonstration period. {Title 129, Chapter 19}

(2) For the purposes of reporting as required under 40 CFR 60.7, 40 CFR 60.49a, 40 CFR 60.49b, and 40 CFR 75, the permittee shall submit reports to the EPA Administrator, designated as the EPA Region VII office, per 40 CFR 60.4, and to the Department. All reports shall be postmarked by the 30th day following the end of each reporting period.

(a) Excess Emissions: Periods of excess emissions shall be recorded and reported quarterly in accordance with 40 CFR 60.7.

(b) Malfunctions: For periods during which any systems related to emissions performance either malfunction or are inoperative during boiler operation, the permittee shall maintain records of the occurrence and duration of the event. These records shall be submitted in the quarterly report, per 40 CFR 60.7(c)(3).

(3) Miscellaneous Correspondence: Reports, notifications, Test Protocol, and Final Report from testing shall be clearly labeled as such and mailed to the Department, and for those submittals required to be submitted to the EPA Administrator, shall be submitted also in duplicate to EPA Region VII per 40 CFR 60.4 and 40 CFR 63.9. All correspondences for this source shall reference the following NDEQ Facility Identification number: 58343, unless otherwise specified. Submittal of electronic media shall be contained on diskette or compact disk (CD) form unless otherwise superseded by other procedures in writing by the Department.

(4) Acid Rain Reporting: The permittee shall prepare and submit quarterly reports as required under the Acid Rain rules, 40 CFR 75, Subpart G.

(I) Recordkeeping: Records shall be maintained on-site for a minimum period of five (5) years from the date of the record and updated no later than the 15th day of each month through the previous month. These records shall be clear and readily accessible to Department representatives and shall include the following:

(1) NSPS Requirements: The permittee shall perform recordkeeping pursuant to 40 CFR 60.7, including, but not limited to, excess emission reports as specified in 40 CFR 60.7(c), as well as a file of other measurements, testing, etc., in accordance with 40 CFR 60.7(f).

(2) Acid Rain Rule Requirements: The permittee shall perform recordkeeping pursuant to the Acid Rain rules under 40 CFR 75, Subpart F, including, but not limited to, calculated annual emissions of NO_x, SO_2, and CO_2, and records of opacity (COMS) readings from the Unit 2 Boiler Stack (201)

(3) Additional Recordkeeping Requirements: The permittee shall maintain written records or computer data of the following items to show compliance with the terms and conditions of this permit:

(a) Fuel consumption: The daily quantity of distillate oil consumed in auxiliary boiler 2 (21-1) shall be recorded as required under 40 CFR 60.49b(d) and in accordance with 40 CFR 63.7506(a)(2).

(b) Fuel Supplier Certification: Certification from the fuel supplier shall be maintained to demonstrate compliance with Condition XIII.(B)(1).

(c) Hours of Operation: The hours of operation for the auxiliary boiler (21-1) and emergency generator (22-1) shall be recorded as 12-month rolling total on a monthly basis to demonstrate compliance with Condition XIII.(B)(1).

(d) Cooling Tower: Records of the vendor-guaranteed maximum total liquid drift to show compliance with Condition XIII.(B)(2). Submit a copy of guarantee to Department prior to operation.

(e) Quarterly Reports: A copy of quarterly reports as required by Condition XIII.(H)(2) and 40 CFR 60.7 for NSPS requirements.

(f) Stack Certification: A copy of the stack certification as required by Condition XIII.(C) to verify the stack information of Table 3.

(g) NSPS Notifications: A copy of the written notifications as required by Condition XIII.(E).

(h) Startups, Shutdowns, and Malfunctions: Records of the startup, shutdown, and malfunction periods in accordance with 40 CFR 60.7(b) and Chapter 35.

(i) Records showing the date, quantity, origin, and type of materials burned in Unit 2 Boiler as required by Condition XIII.(B)(5).

(4) Inspection and maintenance records for each baghouse, to show compliance with Conditions XIII.(B)(3) and (B)(4), shall include the following:

(a) Records documenting when routine observations were performed with a description including pressure differential readings, visual emission observations, and any atypical observations.

(b) Records documenting when routine maintenance and preventive actions were performed with a description of the maintenance and/or preventive action performed.

(c) Filter replacement records including filter position, type, and date of filter installation.

(d) Records documenting equipment or bag failures, malfunctions, or other variations, including time of occurrence, remedial action taken, and when corrections were made.

(J) Acid Rain Requirements: The permittee shall comply with the applicable provisions of the Acid Rain Program of Title IV of the Clean Air Act. {Title 129, Chapter 26}

(K) The existing auxiliary boiler 1 (emission ID 2-1) shall be permanently decommissioned upon startup of the NCS Unit 2 main boiler. {Title 129, Chapters 4 and 19}

The undersigned issues this permit on behalf of the Director under the authority of Title 129 – Nebraska Air Quality Regulations as amended February 6, 2008.

3/6/08 **{Original Signed}**

Date

Shelley Kaderly, Air Administrator
Air Quality Division

FACT SHEET

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

March 6, 2008

DESCRIPTION OF THE FACILITY OR ACTIVITY:

Omaha Public Power District (OPPD) currently operates the Nebraska City Station (NCS) with an existing nominal 650 megawatt (MW) coal-fired electric generating unit (Unit 1) located approximately 5 miles southeast of Nebraska City, Nebraska. This original generation facility is currently a major source of air emissions under both the Prevention of Significant Deterioration (PSD) program and the Title V operating permit program. Its Standard Industrial Classification (SIC) code is 4911, and the North American Industry Classification System (NAICS) code is 221112 for fossil fueled electric generators. NCS was issued a Title V (Class I) operating permit on 04/28/2004 for the operation of Unit 1.

NCS Unit 2 is a nominal 660 MW coal-fired electric generating unit, currently under construction, that received a PSD construction permit on March 9, 2005 for such construction. An amendment to the permit was issued October 26, 2006. This Fact Sheet describes the proposed revisions to the original permit (as amended) based on the construction permit application received on September 26, 2007. The original permit and permit amendment are being superseded by this revised permit.

The revisions consist of the following items:

1. Delete Recycled Ash Storage emission unit (Emission Point 203, ID #25-1) as this emission unit will not be installed.
2. Delete Fly Ash Storage Pneumatic Air Exhauster (EP 211, ID #23-2) as this emission unit will not be installed.
3. Increase air flow for Fly Ash Waste Storage Bin Vent (EP 204, ID #23-1) from 3,850 to 7,800 acfm.
4. Decrease air flow for SDA Lime Storage West Exhaust (EP 202, ID #24-1) from 2,000 to 700 acfm and add a second, identical SDA Lime Storage East Exhaust (new EP 203, ID #24-2).
5. Increase Emergency Generator (EP 207, ID #22-1) stack height and increase PM_{10} emission factor from 0.0573 to 0.0697 lb/MMBtu to correspond with manufacturer's emission specifications.
6. Increase size of Auxiliary Boiler 2 (EP 209, ID #21-1) from nominal size of 125 MMBtu/hr to the tested maximum rate of 142.7 MMBtu/hr.
7. Specify distillate oil as startup and flame stabilization fuel for Unit 2 boiler (EP 201, ID #20-1) and allow on-site generated combustible materials to be burned in the Unit 2 boiler as already allowed in the existing Unit 1 boiler.

The permit application also requested that language be added to the permit related to the total PM_{10} emission limit (filterable + condensable) for the Unit 2 boiler and the possibility of "artifacts" showing up during the PM_{10} testing, making if difficult to meet the permit limit of 0.018 lb/MMBtu. Although the Department is aware that EPA Reference Method 202 "artifacts" may increase the amount of condensable PM_{10} measured during RM202 testing, OPPD provided no specific data to show that the Unit 2 boiler will have any difficulties meeting its PM_{10} BACT limit. As mentioned in the fact sheet issued with the original permit (Section 1.44 on pages 17 & 18), the Department believes the limit in the permit is appropriate. Since OPPD does not yet have any operational experience with NC2 to support why the

permit limit should be revised (or the addition of "demonstration period" language), it is not appropriate at this time to revise this condition.

TYPE AND QUANTITY OF AIR CONTAMINANT EMISSIONS ANTICIPATED:

The proposed revisions to the PSD permit have an insignificant impact on potential emissions from the NCS Unit 2 project originally permitted in 2005. The change in potential emissions due to the requested permit revisions are summarized in Table 1 for all emission points affected by the proposed revisions. The revised emissions summary for the NCS Unit 2 project (initially presented as Table 1 in the original permit fact sheet) is shown in Table 2. Attachment A details the revised emission calculations for affected emission points.

Table 1 - Emissions Change Summary

Emission Point	Unit Description	CHANGE IN POTENTIAL ANNUAL EMISSIONS (tons/yr)							
		NO_x	SO_2	CO	VOC	PM	PM_{10}	H_2SO_4 mist	Total HAPs
202	SDA Lime Storage-West	-	-	-	-	-0.49	-0.49	-	-
203	SDA Lime Storage-East	-	-	-	-	-1.18	-1.18	-	-
204	Fly Ash Waste	-	-	-	-	1.48	1.48	-	-
207	Emergency Generator	-	-	-	-	0.04	0.04	-	-
209	Auxiliary Boiler [a]	0.76	0.25	0.16	0.02	0.10	0.10	0.009	0.002
211	-deleted-	-	-	-	-	-1.88	-1.88	-	-
	Totals:	**0.76**	**0.25**	**0.16**	**0.02**	**-1.92**	**-1.92**	**0.009**	**0.002**

[a] Change in PTE is based on permit limit of 500 hours per year

Table 2 - REVISED Emissions Summary

Emission Point	Unit Description	REVISED POTENTIAL ANNUAL EMISSIONS (tons/yr)								
		NO_x [1]	SO_2	CO	VOC	PM	PM_{10}	H_2SO_4 mist	Fluorides (as HF)	Total HAPs [2]
Existing Equipment										
105	Coal Tripper System					6.76	6.76			
106	Coal Tripper System					6.76	6.76			
109	Coal Crusher House					5.27	5.27			
110	Coal Crusher House					5.27	5.27			
111	Coal Transfer House					1.88	1.88			
New Unit 2 Equipment										
201	Unit 2 Boiler	1,986	2,695	4,540	96.5	510.7	510.7	119.2	11.3	55.4
202	SDA Lime Storage	-	-	-	-	0.26	0.26	-	-	-
203	SDA Lime Storage	-	-	-	-	0.26	0.26	-	-	-
204	Fly Ash Waste	-	-	-	-	2.93	2.93	-	-	-
207	Emer. Gen	10.3	0.2	2.7	0.3	0.22	0.22	negl.	negl.	0.005
208	Cooling Tower	-	-	-	-	12.9	5.8	-	-	-
209	Auxiliary Boiler [3]	6.1	2.0	1.3	0.2	0.8	0.8	0.07	negl.	0.01
	Haul Roads	-	-	-	-	38.7	8.3	-	-	-
	Coal Pile	-	-	-	-	1.24	0.62	-	-	-
	Ash Pile	-	-	-	-	11.8	5.9	-	-	-
	Material Handling	-	-	-	-	2.32	1.10	-	-	-
	Totals:	**2,003**	**2,698**	**4,544**	**97.0**	**582.2**	**536.9**	**119.2**	**11.3**	**55.4**

[1] During the first 18-months of operation, potential emissions of NOx from Unit #2 are 3,405 tons/yr based on 0.12 lb/MMBtu emission limit.

[2] Total HAP emissions includes HF, which is also shown separately in this table, because HF is a PSD regulated pollutant.

[3] Prior to Unit 2 boiler becoming operational, Auxiliary Boiler (209) will have a PTE approximately 53% higher than listed in table above.

APPLICABLE REQUIREMENTS AND VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS:

Chapter 4 – Ambient Air Quality Standards:

This air quality impact analysis for the proposed permit revision was prepared to assess the effects of minor changes in PM emission rates, plus some changes on stack/exhaust parameters for PM sources. Given these changes, the applicant completed a PM_{10} dispersion modeling analysis. The Department determined that revised modeling for NO_x, CO, or SO_2 is not required due to the minimal increase in emissions and that no additional emission points were added that emit these pollutants.

The purpose of the preliminary dispersion modeling analysis was to determine if revised emissions from operation of Unit 2 and associated new emission sources would cause ambient pollutant concentrations in excess of concentration thresholds above which pre-application ambient air quality monitoring may be required. In addition, the results were reviewed to determine if a significant impact level (SIL) would be exceeded for PM_{10}. The latest version of the EPA's guideline version of the AMS/EPA Regulatory Dispersion Model (AERMOD) was used for this analysis.

The meteorological data used for this analysis consisted of five years (2000-2004) of National Weather Service surface data from Eppley Airport in Omaha (station number 14942) and mixing height data for Omaha (station number 94980).

Table 3 shows the results of the preliminary dispersion modeling analysis and pre-application ambient monitoring threshold analysis. The results indicate that the operation of the NCS Unit 2 project will not cause a significant impact in the area surrounding NCS for the 24-hour or annual averaging periods for PM_{10}. The 24-hour average maximum PM_{10} impact is also below the PSD pre-construction monitoring threshold. Therefore, no further modeling analysis is required for this minor permitting action.

Table 3 - Maximum Modeled NCS Unit 2 Project PM_{10} Concentrations, Significant Impact Levels, and Pre-application Monitoring Thresholds

Pollutant	Averaging Period	Modeled Concentration (ug/m^3)	SIL (ug/m^3)	Pre-application Monitoring Threshold Concentration (ug/m^3)
PM_{10}	Annual	0.71	1.0	N/A
	24-hr	4.6	5.0	10

Chapter 15 – Permit Revisions: The permit is being revised in accordance with Section 005 (significant permit revision) since it is not classified as an administrative amendment or a minor permit revision.

Chapter 17 – Construction Permit Requirements:
Since a construction permit application is required for a significant permit revision (Chapter 15, Section 005), the source is required to submit an application fee. Potential emissions from the source are greater than 100 tons/year for at least one pollutant; therefore the source submitted a $3,000 application fee in accordance with Title 129, Chapter 17, Section 003.01.

Chapter 18 – New Source Performance Standards (NSPS), and 40 CFR Part 60: There are no changes to NSPS requirements applicable in the original permit as a result of this permit revision.

Chapter 19 – Prevention of Significant Deterioration (PSD):
The existing NCS facility is classified as a major stationary source under the PSD program (>100 tpy). As a fossil fuel-fired steam electric plant of more than 250 MMBtu/hr heat input, NCS is included as one of the 28 listed source categories in 40 CFR 52.21(b)(1)(iii) that must include fugitive emissions in determining whether a proposed modification is major. However, fugitive emissions estimates will not be affected by the proposed revision of the PSD permit.

The BACT analysis provided in the original permit application for the affected emission units remains valid with respect to the proposed permit revisions. The adjustment of baghouse airflow rates at emission points 202, 203, and 204 has no effect on the original BACT determination. The Auxiliary Boiler PTE of all pollutants will be slightly greater (due to increase in maximum capacity), but the BACT determination does not change due to the limited use of the boiler (<500 hrs/yr) and the use of very low sulfur distillate oil fuel.

Chapter 28 – Hazardous Air Pollutant Emission Standards (MACT):
The source is currently a major source of Hazardous Air Pollutants (HAPs). The proposed permit revision will change HAP emissions by an insignificant amount, less than 0.01 ton/year. This will not affect any current requirements in the permit, and will not trigger any new MACT or related requirements.

Changes to terms and Specific Conditions of the original permit (as amended) are discussed below:

If a specific condition is not discussed below, it has not been revised as a result of this permit action.

XIII.(A) This condition specifies the emissions-related equipment that is allowed to be installed under this construction permit. The only revisions to this condition occurred in Table 1 as outlined below (new text in **bold underline**, deleted text is ~~lined out~~):

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 Exhaust**-West** (24-1)	~~2,000 acfm~~ **700 acfm**
203	~~Recycled Ash Storage (25-1)~~ **SDA Lime Storage Exhaust-East (24-2)**	~~3,850 acfm~~ **700 acfm**
204	Fly Ash Waste Storage Bin Vent (23-1)	~~3,850 acfm~~ **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)	~~125 MMBtu/hr~~ **142.7 MMBtu/hr**
~~211~~	~~Fly Ash Pneumatic Air Exhauster (23-2)~~	~~5,000 acfm~~
215	Activated Carbon (Hg control) Silo Exhaust (27-1)	2,000 acfm

XIII.(B) This condition was changed in three places. First, Table 2 in Condition (B)(1) was revised to add distillate fuel oil as an allowed fuel for the Unit 2 boiler. Distillate fuel is used during startup of the boiler and during pulverizer switching. Second, Condition (B)(3) was revised to remove emission point 211 from the list of baghouse controlled emission points. Third, Condition (B)(5) was added to allow other combustible material to be burned in the Unit 2 boiler. This includes materials such as boiler cleaning wastes, used oil, and oil absorbent materials. The majority of the material consists of used oil from electric generating equipment. This oil is not directly fired in the boilers, rather it is incorporated into the coal pile and then fed into the coal handling system. Although there are no limitations in the permit on burning used oil, OPPD cannot accept used oils from off-site. As such, quantities will be minimal (typically less than 15,000 gallons during any 12 months). This permit language is consistent with the OPPD's Title V operating permit covering the existing Unit 1 boiler.

XIII.(C) This condition was changed in one place. The stack height for emission point 207 was increased from 12 to 27 feet in Table 3.

XIII.(D) Table 4 in this condition was changed by deleting emission point 211 (it will not be constructed) and changing the emission unit ID for emission point 203 from Recycled Ash Storage (25-1) to SDA Lime Storage Exhaust-East (24-2).

XIII.(F) Table 5 in this condition was changed by deleting emission point 211 from the list of emission points requiring initial performance testing. The source also asked for language to be added that allowed testing of only one SDA Lime Storage baghouse to satisfy testing requirements for both baghouse since they are identical. The requested language was not added to the permit because the Department reserves the right to require testing of all units. Testing only one of a set of multiple, identical emission points may be allowed under limited circumstances. This request may accompany the testing protocol and will be evaluated at that time.

XIII.(I)(3) This condition was revised by adding paragraph (i) to specify the recordkeeping requirements to demonstrate compliance with Condition XIII.(B)(5).

STATUTORY OR REGULATORY PROVISIONS ON WHICH PERMIT REQUIREMENTS ARE BASED:

Applicable regulations: Title 129 - Nebraska Air Quality Regulations as amended February 6, 2008.

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

The public notice, as required under NAQR Chapter 14, shall be published on January 29, 2008, in the Nebraska City News-Press newspaper. Persons or groups shall have 30 days from that issuance of public notice (February 27, 2008) 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:

Brad Reid, P.E.-Construction Permitting Unit Supervisor
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.

OPPD - Nebraska City Station

Table 1 - Emissions Change Summary

Emission Point	Unit Description	CHANGE IN POTENTIAL ANNUAL EMISSIONS (tons/yr)							
		NO_x	SO_2	CO	VOC	PM	PM_{10}	H_2SO_4 mist	Total HAPs
202	SDA Lime Storage-West	-	-	-	-	-0.49	-0.49	-	-
203	SDA Lime Storage-East	-	-	-	-	-1.18	-1.18	-	-
204	Fly Ash Waste	-	-	-	-	1.48	1.48	-	-
207	Emer. Gen	-	-	-	-	0.04	0.04	-	-
209	Auxiliary Boiler [a]	0.76	0.25	0.16	0.02	0.10	0.10	0.009	0.002
211	-emission piont deleted-	-	-	-	-	-1.88	-1.88	-	-
	Totals:	**0.76**	**0.25**	**0.16**	**0.02**	**-1.92**	**-1.92**	**0.009**	**0.002**

[a] Change in PTE is based on permit limit of 500 hours per year

Table 2 - REVISED Emissions Summary

Emission Point	Unit Description	REVISED POTENTIAL ANNUAL EMISSIONS (tons/yr)								
		NO_x [1]	SO_2	CO	VOC	PM	PM_{10}	H_2SO_4 mist	Fluorides (as HF)	Total HAPs [2]
Existing Equipment										
105	Coal Tripper System					6.76	6.76			
106	Coal Tripper System					6.76	6.76			
109	Coal Crusher House					5.27	5.27			
110	Coal Crusher House					5.27	5.27			
111	Coal Transfer House					1.88	1.88			
New Unit 2 Equipment										
201	Unit 2 Boiler	1,986	2,695	4,540	96.5	510.7	510.7	119.2	11.3	55.4
202	SDA Lime Storage	-	-	-	-	0.26	0.26	-	-	-
203	SDA Lime Storage	-	-	-	-	0.26	0.26	-	-	-
204	Fly Ash Waste	-	-	-	-	2.93	2.93	-	-	-
207	Emer. Gen	10.3	0.2	2.7	0.3	0.22	0.22	negl.	negl.	0.005
208	Cooling Tower	-	-	-	-	12.9	5.8	-	-	-
209	Auxiliary Boiler [3]	6.1	2.0	1.3	0.2	0.8	0.8	0.07	negl.	0.01
	Haul Roads	-	-	-	-	38.7	8.3	-	-	-
	Coal Pile	-	-	-	-	1.24	0.62	-	-	-
	Ash Pile	-	-	-	-	11.8	5.9	-	-	-
	Material Handling	-	-	-	-	2.32	1.10	-	-	-
	Totals:	**2,003**	**2,698**	**4,544**	**97.0**	**582.2**	**536.9**	**119.2**	**11.3**	**55.4**

[1] During the first 18-months of operation, potential emissions of NOx from Unit #2 are 3,405 tons/yr based on 0.12 lb/MMBtu emission limit.

[2] Total HAP emissions includes HF, which is also shown separately in this table, because HF is a PSD regulated pollutant.

[3] Prior to Unit 2 boiler becoming operational, Auxiliary Boiler (209) will have a PTE approximately 53% higher than listed in table above.

Emission Calculations: Auxiliary Boiler 2

OPPD - Nebraska City Station
Emission Point ID# 209

Heat Input increased from 125.0 to 142.7 MMBtu/hr

Distillate Oil Combustion (Electric Services): SCC 1-01-005-01

Hours	Power Output (kW)	Horsepower (HP)	Heating Value (Btu/gal)	Heat Input MMBtu/hr	Fuel Input (gal/hr)	Fuel Use (MMgal/yr)[a]
500	-	-	139,000	142.7	1,027	0.513

PSD-Regulated Air Pollutants	CAS#	Emission Factor (lb/MMBtu)	Pollutant Emissions		From Previously Issued Permit: Pollutant Emissions[a]		Increase due to permit revision: Increase in PTE
			lb/hr	TPY	lb/hr	TPY	TPY
Nitrogen Oxides (NO_x)[b]	10102-43-9	1.71E-01	24.40	6.10	21.38	5.34	0.76
Sulfur Dioxide (SO_2)[b]	7446-09-5	5.60E-02	7.99	2.00	7.00	1.75	0.25
Carbon Monoxide (CO)[b]	630-08-0	3.57E-02	5.09	1.27	4.46	1.12	0.16
Particulate Matter (PM)[b]	-	2.36E-02	3.37	0.84	2.95	0.74	0.10
Particulate Matter < 10 Microns (PM_{10})[b]	-	2.36E-02	3.37	0.84	2.95	0.74	0.10
Volatile Organic Compounds (VOC)[c]	-	5.46E-03	0.78	0.19	0.68	0.17	0.02
Lead (Pb)[d]	7439-92-1	9.00E-06	0.00	0.00	0.00	0.00	0.00
Sulfuric Acid (H_2SO_4)[b]	7664-93-9	2.05E-03	0.29	0.07	0.26	0.06	0.01

Hazardous Air Pollutants (not regulated under PSD rules, per federal CAA)	CAS#	Emission Factor (lb/MMBtu)	Pollutant Emissions		From Previously Issued Permit: Pollutant Emissions[a]		Increase due to permit revision: Increase in PTE
			lb/hr	TPY	lb/hr	TPY	TPY
Arsenic[d]	7440-38-2	4.00E-06	0.0006	0.0001	0.0005	0.0001	0.0000
Benzene[e]	71-43-2	1.54E-06	0.0002	0.0001	0.0002	0.0000	0.0000
Beryllium[d]	7440-41-7	3.00E-06	0.0004	0.0001	0.0004	0.0001	0.0000
Cadmium[d]	7440-43-9	3.00E-06	0.0004	0.0001	0.0004	0.0001	0.0000
Chromium[d]	7440-47-3	3.00E-06	0.0004	0.0001	0.0004	0.0001	0.0000
Ethylbenzene[e]	25321-22-6	4.50E-07	0.0001	0.0000	0.0001	0.0000	0.0000
Formaldehyde[e]	50-00-0	2.40E-04	0.0342	0.0086	0.0300	0.0075	0.0011
Lead (Pb)[d]	7439-92-1	9.00E-06	0.0013	0.0003	0.0011	0.0003	0.0000
Manganese[d]	7439-96-5	6.00E-06	0.0009	0.0002	0.0008	0.0002	0.0000
Mercury[d]	7439-97-6	3.00E-06	0.0004	0.0001	0.0004	0.0001	0.0000
Naphthalene[e]	91-20-3	8.10E-06	0.0012	0.0003	0.0010	0.0003	0.0000
Nickel[d]	7440-02-0	3.00E-06	0.0004	0.0001	0.0004	0.0001	0.0000
Polynuclear Aromatic Hydro. (PAHs)[e]	-	8.50E-06	0.0012	0.0003	0.0011	0.0003	0.0000
Selenium[d]	7782-49-2	1.50E-05	0.0021	0.0005	0.0019	0.0005	0.0001
Toluene[e]	108-88-3	4.40E-05	0.0063	0.0016	0.0055	0.0014	0.0002
1,1,1-Trichloroethane[e]	71-55-6	1.70E-06	0.0002	0.0001	0.0000	0.0000	0.0000
Xylene[e]	1330-20-7	7.80E-07	0.0001	0.0000	0.0001	0.0000	0.0000
			Total HAPs:	0.0126	**Total HAPs:**	0.0111	0.0016

Notes:

[a] Permit allows combustion of up to 787,524 gallons of fuel per year prior to startup of the Unit 2 coal boiler. After startup of the Unit 2 coal boiler, Aux boiler is limited to 500 hours of operation per year. Emissions presented in table represent PTE after startup of the Unit 2 coal boiler (PTE before Unit 2 startup is approximately 53% higher for all pollutants).

[b] Emission factors from AP-42 (09/98), Table 1.3-1 & 1.3-2.

[c] Emission factors from AP-42 (09/98), Table 1.3-3.

[d] Emission factors from AP-42 (09/98), Table 1.3-10.

[e] Emission factors from AP-42 (09/98), Table 1.3-9.

Attachment A
Nebraska City Station Unit 2

PTE for Distillate Oil Combustion: Electrical Generator

OPPD - Nebraska City Station
Emission Point ID# 207

Distillate Oil Combustion (Electric Services): SCC 2-01-001-02

Hours	Power Output (kW)	Horsepower (HP)	Heating Value (Btu/gal)	Heat Input MMBtu/hr	Fuel Input (gal/hr)	Fuel Use (MMgal/yr)
500	1,500	1,837	139,000	12.86	93	0.046

PSD-Regulated Air Pollutants	CAS#	Emission Factor (lb/MMBtu)	Pollutant Emissions		From previously issued permit (TPY)	Increase due to permit revision (TPY)
			lb/hr	TPY		
Nitrogen Oxides (NO_x)[a]	10102-43-9	3.2	41.15	**10.29**		
Sulfur Dioxide (SO_2)[a]	7446-09-5	0.05	0.65	**0.16**		
Carbon Monoxide (CO)[a]	630-08-0	0.85	10.93	**2.73**		
Particulate Matter (PM)[a]	-	0.07	0.90	**0.22**		
Particulate Matter < 10 Microns (PM_{10})[a]	-	0.07	0.90	**0.22**	**0.18**	**0.04**
Volatile Organic Compounds (VOC)[a]	-	0.09	1.16	**0.29**		
Lead (Pb)[b]	7439-92-1	negl.	0.00	**0.00**		
Sulfuric Acid (H_2SO_4)	7664-93-9	negl.	0.00	**0.00**		

Hazardous Air Pollutants (not regulated under PSD rules, per federal CAA)	CAS#	Emission Factor (lb/MMBtu)	Pollutant Emissions	
			lb/hr	TPY
Acrolein[b]	107-02-8	7.88E-06	0.0001	**0.0000**
Acetaldehyde[b]	75-07-0	2.52E-05	0.0003	**0.0001**
Benzene[b]	71-43-2	7.76E-04	0.0100	**0.0025**
Formaldehyde[b]	50-00-0	7.89E-05	0.0010	**0.0003**
Naphthalene[c]	91-20-3	1.30E-04	0.0017	**0.0004**
Polynuclear Aromatic Hydro. (PAHs)[c]	-	8.20E-05	0.0011	**0.0003**
Toluene[b]	108-88-3	2.81E-04	0.0036	**0.0009**
Xylene[b]	1330-20-7	1.93E-04	0.0025	**0.0006**
			Total HAPs	**0.0051**

Notes:

[a] Emission factors from AP-42 (10/96), Table 3.4-1 & 3.4-2.
[b] Emission factors from AP-42 (10/96), Table 3.4-3.
[c] Emission factors from AP-42 (10/96), Table 3.4-4.

Attachment A
Nebraska City Station Unit 2

Change in PM/PM10 Emissions From Miscellaneous Dust Collector (Baghouse) Vents

OPPD - Nebraska City Station

Description	Emission Point	NDEQ ID	Flowrate (acfm)	Grain Loading (gr/cf)	Operating Hours	Potential PM/PM_{10} Emissions		
						(lb/hr)	(tpy)	Change (tpy)
Existing Permitted Equipment								
SDA Lime Storage Exhaust	202	24-1	2,000	0.01	8,760	0.17	0.75	
Recycled Ash Storage	203	25-1	3,850	0.01	8,760	0.33	1.45	
Fly Ash Waste Storage Vent	204	23-1	3,850	0.01	8,760	0.33	1.45	
Fly Ash Exhauster	211	23-2	5,000	0.01	8,760	0.43	1.88	
Revised Permitted Equipment								
SDA Lime Storage-West	202	24-1	700	0.01	8,760	0.06	0.26	-0.49
SDA Lime Storage-East	203	24-2	700	0.01	8,760	0.06	0.26	-1.18
Fly Ash Waste Storage Vent	204	23-1	7,800	0.01	8,760	0.67	2.93	1.48
-emission point deleted-	211					0.00	0.00	-1.88
							Total Change in Emissions:	-2.06

Example Calculation:

Flowrate = 2,000 cubic feet per minute
Emission Rate/Limit = 0.01 grains per cubic foot
(2,000 cfm) x (60 min/hr) x (0.01 gr/cf) x (1 lb/7000 grains) = 0.17 lb/hr