United States Environmental Protection Agency
Region 8
Air and Radiation Program
1595 Wynkoop Street
Denver, Colorado 80202-1129
August 30, 2007

Final
Air Pollution Control
Prevention of Significant Deterioration (PSD)
Permit to Construct

PSD-OU-0002-04.00

Permittee:
Deseret Power Electric Cooperative
10714 South Jordan Gateway
South Jordan, Utah 84095

Permitted Facility:
110-Megawatt Waste Coal Fired Unit
at Bonanza Power Plant
Uintah County, Utah

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I. Introduction

This Federal PSD permit is being issued under authority of 40 CFR 52.21. Deseret Power Electric Cooperative (hereinafter the "Permittee") proposes to construct a new 110-megawatt waste-coal-fired steam electrical generating unit ("WCFU") at the Permittee's existing Bonanza power plant near Bonanza, Utah, on the Uintah & Ouray Indian Reservation. Steam for the new unit will be supplied by a Circulating Fluidized Bed (CFB) boiler, with a maximum heat input capacity not to exceed 1,445 million Btu per hour (MMBtu/hr), and designed to combust waste coal from the Permittee's existing Deserado mine. The waste coal is generated from the coal washing process at the mine. Washed coal is supplied to the existing Bonanza Unit 1. Waste coal, which is presently landfilled in refuse pits at the Deserado mine will be reclaimed and/or diverted from the landfill for use in the new unit.

Proposed emission control equipment for the WCFU will consist of a baghouse for particulate control, a combination of limestone injection into the combustion zone and a dry scrubber downstream of the CFB boiler for control of sulfur oxides, sulfuric acid and condensible particulate matter, and Selective Non-Catalytic Reduction (SNCR) for control of nitrogen oxides. Dust from coal and limestone handling will be controlled by use of enclosed conveyors and by venting of dust to fabric filter dust collectors at conveyor transfer points. Dust from the coal and limestone stockpiles will be controlled by compaction and by spraying of surfactant sealant and/or water, where required by this permit. Dust from ash handling will be controlled by venting of dust to fabric filter dust collectors and by hydrating the ash prior to transfer for disposal.

Potential controlled emissions from the WCFU are estimated as the following:

Pollutant	Estimate	Basis of emission estimate
Particulate matter at CFB boiler stack	190 tons/yr	0.03 lb/MMBtu allowable emission rate, including condensible particulate
Particulate matter from coal, ash and limestone handling	18 tons/yr	AP-42 emission factors for coal, ash and limestone handling; emission limits in this permit for baghouses
Sulfur Dioxide	348 tons/yr	0.055 lb/MMBtu allowable emission rate
Nitrogen Oxide	557 tons/yr	0.088 lb/MMBtu allowable emission rate
Carbon Monoxide	949 tons/yr	0.15 lb/MMBtu allowable emission rate
Sulfuric acid	22 tons/yr	0.0035 lb/MMBtu allowable emission rate
Volatile Organic Compounds	32 tons/yr	0.005 lb/MMBtu emission rate by boiler design

The existing Bonanza power plant consists of a single bituminous coal-fired unit, rated at approximately 500 megawatts electrical output. It was constructed in the early 1980's and is operating under a Federal PSD permit originally issued on February 4, 1981, then updated and reissued on February 7, 2001. The existing power plant is a "major stationary source" as defined in Federal PSD rules at 40 CFR 52.21(b)(1)(i). The EPA has determined that the addition of the WCFU will constitute a "major modification" as defined in §52.21(b)(2)(i), and will therefore require a PSD permit. The WCFU is expected to result in significant emission increases of particulate matter, sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO) and sulfuric acid (H_2SO_4) from the power plant. Application of Best Available Control Technology (BACT) is required for these pollutants under §52.21(j)(3).

The initial PSD permit application for the WCFU was submitted on April 14, 2004. The application was revised and resubmitted on November 1, 2004. A modeling protocol was initially submitted on August 14, 2001, then revised and resubmitted on March 9, 2004. The permit application included an air quality modeling analysis, additional impacts analysis (regional haze, plume blight and deposition) and visibility analysis for Federal Class I areas under 40 CFR 52.21(k), (l), (m), (o) and (p), as well as proposed emission limits for the WCFU. Emissions from existing Bonanza Unit 1 were included in the modeling analysis. No violations of PSD Class I or Class II ambient air increments, or of National Ambient Air Quality Standards, were predicted.

Subsequent discussions between the Permittee and EPA led to further revisions to the permit application, principally:

- a proposal for a dry scrubber for additional SO_2 control,
- a proposal for lower BACT emission limits than originally proposed for particulate matter, SO_2 and NO_x,
- a proposal for alternative BACT emission restrictions applicable during boiler startup and shutdown events,
- a proposal for BACT emission limits for the materials handling baghouses and cooling tower,
- a revised proposal for BACT emission limits for the emergency generator,
- a top-down BACT analysis for control of condensible particulate matter, and
- a request for operational flexibility to blend run-of-mine with the waste coal at any time, if needed, at up to a 50/50 ratio by weight, equivalent to approximately 6,500 Btu/lb coal.

Correspondence between the Permittee and EPA pertaining to these application revisions and other topics is included in the Administrative Record for issuance of this permit. A chronology and description of that correspondence is included in the Statement of Basis for issuance of this permit.

II. Findings

On the basis of the information in the administrative record, EPA has determined that:

A. The Permittee will meet all of the applicable requirements of the PSD regulations (40 CFR 52.21);

B. No applicable emission standard, PSD increment, or national ambient air quality standard will be violated by the emissions from the permitted facility; and

C. The Permittee can comply with the conditions of this permit.

In issuing this permit EPA does not assume any risk of loss which may occur as a result of the operation of the permitted facility by the Permittee, if the conditions of this permit are not met by the Permittee.

III. Conditional Permit to Construct

A. General Information

Permit number:	PSD-OU-0002-04.00
AFS number:	049-047-00001
SIC Code and SIC Description:	4911 – Electric services

Site Location	Corporate Office Location
Bonanza Power Plant	Deseret Power Electric Cooperative
12500 East 25500 South	10714 South Jordan Gateway
Vernal, Utah 84078	South Jordan, Utah 84095

The equipment listed in this permit shall be constructed by Deseret Power at the following location:

Bonanza Power Plant
Latitude 40° 05' 11" N, Longitude 109° 16' 48" W
35 miles southeast of Vernal, Utah

B. Process Description: The Waste Coal Fired Unit (WCFU) will consist of a circulating fluidized bed (CFB) boiler and associated equipment at the existing Bonanza power plant. The WCFU will have a nominal capacity of up to 110 megawatts gross electrical output. The CFB boiler will supply superheated steam to the extracting/condensing turbine, to drive an electrical generator and supply cycle and plant auxiliary steam through uncontrolled extraction from the turbine.

The CFB boiler will be fired on western bituminous coal from the Deserado mine. Deseret Power has designed the project to be fired on waste coal alone, but has also requested operational flexibility in the permit to use a blend of waste coal and run-of-mine coal at any time, as needed, at up to a 50/50 ratio by weight (equivalent to coal with heat content of approximately 6,500 Btu/lb). Run-of-mine coal is raw coal from the mine that has not been washed in the coal washing plant at the mine. During emergencies that would prevent the waste coal from being delivered and placed into the WCFU, Deseret Power has requested permit flexibility to use either run-of-mine coal or washed coal from the Deserado mine.

The waste coal is produced as an unavoidable byproduct of the coal washing process at the Deserado mine. The waste coal has a nominal heating value range of approximately 3,000 to 5,400 Btu/lb, with an average heating value of approximately 4,000 Btu/lb. The waste coal will be delivered via an existing electric train line from the Deserado mine, approximately 35 miles east of the Bonanza power plant. The run-of-mine coal has a heating value ranging from 8,500 to 10,000 Btu/lb.

Emission controls for the CFB boiler shall consist of:

- a pulse-jet fabric filter baghouse for particulate control,
- limestone injection into the CFB combustion zone, along with a dry scrubber downstream for SO_2 and H_2SO_4 control,
- Selective Non-Catalytic Reduction (SNCR) for NO_x control, and
- proper combustion practices for CO control.

Emission controls for particulate emissions from coal, limestone and ash handling shall consist of enclosed conveyors and venting of dust to fabric filter dust collectors at conveyor transfer points. This permit includes BACT emission limits for the CFB boiler and for the fabric filter dust collectors at the materials handling system, as required by 40 CFR 52.21(j)(3).

An emergency generator will also be installed, with potential emissions below 1 ton/yr for all pollutants, based on maximum expected operation of 100 hours per year. This permit includes BACT emission limits for the emergency generator, as required by §52.21(j)(3).

Emission controls for fugitive particulate emissions from coal, limestone and ash/sludge stockpiles shall consist of compaction and periodic spraying of surfactant sealant. This permit includes operational requirements as BACT for fugitive emission control.

The WCFU will utilize portions of the existing Bonanza power plant facilities, including: control room, administration building, raw water supply system, fuel oil system, plant drains, storm drains, sanitary and corrosive drain systems, ash conveyors, delivery of waste coal via existing electric train from the Deserado mine, coal rail car receiving hopper and transfer building, demineralized water system, fire protection/ service water, potable water, auxiliary steam, grounding and cathodic protection systems.

C. Approved Installation

The approved WCFU installation shall consist of the following equipment:

One circulating fluidized bed boiler, maximum heat input capacity not to exceed 1,445 MMBtu/hr, designed for firing on waste coal.

Emission controls for CFB boiler: pulse-jet fabric filter baghouse, limestone injection system, dry SO_2 scrubber (spray dry absorber), Selective Non-Catalytic Reduction.

Emergency generator (diesel-fired internal combustion engine, not to exceed 750 kilowatt estimated capacity, equivalent to 1,005 estimated horsepower).

Coal handling system: enclosed coal conveyors, coal storage pile, coal bunkers, dust collection systems (baghouses and vent filters) at coal transfer points:

Emission Point ID	Estimated Air Flow	Location
Baghouse OCH/DC-1	15,000 dscfm	existing terminal building
Baghouse EP-W-MH-01	8,500 dscfm	crusher building
Baghouse EP-W-MH-02	8,500 dscfm	coal day silo headhouse

Limestone handling system: storage pile, reclaim hopper, limestone silo with dust collection system (baghouses and vent filter):

Emission Point ID	Estimated Air Flow	Location
Baghouse EP-W-MH-03	1,000 dscfm	Limestone crushers
Vent filter EP-W-MH-04	1,000 dscfm	Surge bin
Baghouse EP-W-MH-05	4,000 dscfm	Limestone storage silo

Ash handling system: ash hydration for dust control, ash transfer system to landfill, with dust collection system (baghouses and vent filters):

Emission Point ID	Estimated Air Flow	Location
Vent filter EP-W-MH-06	1,000 dscfm	Bed ash recirculation bin
Vent filter EP-W-MH-07	1,000 dscfm	Bed ash disposal surge bin
Baghouse EP-W-MH-08	3,600 dscfm	Fly ash silo
Baghouse EP-W-MH-09	3,600 dscfm	Bed ash silo

Lime material handling with dust collection (vent filter):

Emission Point ID	Estimated Air Flow	Location
Vent filter EP-W-MH-10	2,000 dscfm	Lime storage silo

Inert material handling with dust collection (vent filter):

Emission Point ID	Estimated Air Flow	Location
Vent filter EP-W-MH-11	2,000 dscfm	Inert bed day bin

Cooling tower with cellular-type mist eliminators

D. PSD BACT and Other Emission Limits

The term "30-day rolling average," as used in this permit, shall mean the average of 30 successive boiler operating days.

The term "boiler operating day," as used in this permit, shall have the meaning given in the revised 40 CFR 60 Subpart Da, published in the Federal Register on February 27, 2006 (71 FR 9866), as it applies to new units: *"Boiler operating day" ... means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted for the entire 24-hour period.*

1. CFB boiler

a. Particulate matter (PM): The Permittee shall not discharge or cause the discharge of total particulate matter (including condensible particulate matter) from the CFB boiler to the atmosphere in excess of 0.03 lb/MMBtu heat input, on a 24-hour block average (midnight to midnight), of which the filterable (non-condensible) portion shall not exceed 0.012 lb/MMBtu heat input on a 24-hour block average. The same emission limits shall apply for PM_{10}.

Because condensible particulate matter emissions from CFB boilers have not been widely quantified, there is a possibility that the actual condensible portion of particulate matter would cause the emission limit of 0.03 lb/MMBtu for total PM/PM_{10} to be exceeded. In the event the Permittee cannot meet that limit because of condensible particulate matter, EPA may adjust the emission limit to a level not to exceed 0.045 lb/MMBtu, pending EPA's review of stack test results at the CFB boiler.

b. Sulfur dioxide (SO_2): The Permittee shall not discharge or cause the discharge of SO_2 from the CFB boiler to the atmosphere in excess of the following:

(i) Prior to the date which is 12 months after completion of initial performance testing: 0.055 lb/MMBtu heat input, on a 30-day rolling average.

(ii) Beginning on the date which is 12 months after completion of initial performance testing, and thereafter:

(a) 0.055 lb/MMBtu heat input, on a 30-day rolling average, for any boiler operating day when the uncontrolled SO_2

emission potential of the combusted coal is 2.2 lb/MMBtu or greater, on a 30-day rolling average.

(b) a calculated emission limit, on a 30-day rolling average, as set forth below, for any boiler operating day when the uncontrolled SO_2 emission potential of the combusted coal is less than 2.2 lb/MMBtu, on a 30-day rolling average:

$$\frac{0.055A + 0.040B}{30} \quad \text{lb/MMBtu heat input}$$

Where:

A = Number of BOD, during 30 successive BODs prior to the calculation, when the uncontrolled SO_2 emission potential of the combusted coal was 1.9 lb/MMBtu or greater, on a 30-day rolling average

B = Number of BOD, during 30 successive BODs prior to the calculation, when the uncontrolled SO_2 emission potential of the combusted coal was less than 1.9 lb/MMBtu, on a 30-day rolling average

BOD = Boiler Operating Day

For purposes of determining the applicable SO_2 emission limit in either *(a)* or *(b)* above, the uncontrolled SO_2 emission potential of the coal, on a 30-day rolling average, shall be based on coal samples obtained during a period of 30 successive BODs which ends five BODs prior to the day on which the emission limit applies.

c. Nitrogen oxides (NO_x): The Permittee shall not discharge or cause the discharge of NO_x from the CFB boiler to the atmosphere in excess of the following:

(i) Prior to the date which is 12 months after completion of initial performance testing: 0.088 lb/MMBtu heat input, on a 30-day rolling average.

(ii) Beginning on the date which is 12 months after completion of initial performance testing, and thereafter: 0.080 lb/MMBtu heat input, on a 30-day rolling average.

d. Carbon monoxide (CO): The Permittee shall not discharge or cause the discharge of CO from the CFB boiler to the atmosphere in excess of 0.15 lb/MMBtu heat input, on a 30-day rolling average.

e. Sulfuric acid (H_2SO_4): The Permittee shall not discharge or cause the discharge of sulfuric acid from the CFB boiler to the atmosphere in excess of 0.0035 lb/MMBtu heat input, average of three EPA Method 8 or NCASI Method 8A test runs.

2. Emergency generator: The Permittee shall only use an Emergency Generator engine that is certified by the engine manufacturer, via "certification of conformity" from EPA as defined in 40 CFR part 89, to be compliant with the following engine emission standards, for non-road compression-ignition engines with rated power more than 560 kilowatts, as codified at 40 CFR 89.112, Table 1:

a. For NO_x plus nonmethane hydrocarbons, the "Tier 2" emission standard of 6.4 grams per kilowatt-hour.

b. For CO, the "Tier 2" emission standard of 3.5 grams per kilowatt-hour.

c. For particulate matter, the "Tier 2" emission standard of 0.20 grams per kilowatt-hour.

3. Materials handling system. The Permittee shall not discharge, or cause the discharge, of particulate matter from the materials handling system baghouses or vent filters in excess 10 percent opacity on a six-minute average[1], nor at the baghouses in excess of the following emission limits, in grains per dry standard cubic foot (gr/dscf), average of three EPA Method 5 or 5D test runs:

Emission Point	Location	Emission Limit
OCH/DC-1	Existing terminal building	0.005 gr/dscf
EP-W-MH-01	Crusher building	0.005 gr/dscf
EP-W-MH-02	Coal day silo headhouse	0.005 gr/dscf
EP-W-MH-03	Limestone crushers	0.01 gr/dscf
EP-W-MH-05	Limestone storage silo	0.01 gr/dscf
EP-W-MH-08	Fly ash silo	0.01 gr/dscf
EP-W-MH-09	Bed ash silo	0.01 gr/dscf

[1] The ten percent visible opacity limit is included for the purpose of monitoring performance of the material handling baghouses but is not a BACT requirement.

4. Cooling tower: For purposes of limiting emissions of particulate matter, the cooling tower shall be equipped with cellular-type mist eliminators designed to limit circulating water drift loss to no more than 0.001 percent.

E. PSD BACT Operating Requirements and Fuel Restrictions

1. General requirements. At all times, including periods of startup, shutdown, and malfunction, all equipment, facilities and air pollution control systems installed or used to achieve compliance with this permit shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Air pollution control systems subject to this permit condition shall include the following:

   a. CFB boiler: Pulse-jet fabric filter baghouse for control of particulate emissions, limestone injection system and dry SO_2 scrubber for control of sulfur dioxide, sulfuric acid and condensible particulate emissions, and a Selective Non-Catalytic Reduction system for control of nitrogen oxide emissions.

   b. Coal, ash and limestone handling: Baghouses and vent filters as listed in condition III.C of this permit, and emission control equipment and techniques as listed in condition III.F of this permit, for control of particulate emissions.

2. Fuel restrictions at CFB boiler.

   a. Fuel during startup. The Permittee shall not combust, in the CFB boiler, any startup fuel other than diesel fuel (#2 grade fuel oil or better) or natural gas. The diesel fuel shall have a sulfur content of no more than 0.05 percent (500 parts per million) by weight.

   b. Fuel during emergencies when waste coal is not available. During any emergency that prevents waste coal from being delivered from the Deserado mine and placed into the WCFU, the Permittee is permitted to combust, in the CFB boiler, any other coal originating from the Deserado mine, including run-of-mine coal or washed coal.

      For purposes of this permit condition, an emergency shall mean any situation arising from sudden and reasonably unforeseeable events beyond the control of the Permittee. Depletion of the waste coal stockpile at the Deserado mine is not an emergency. Run-of-mine coal shall mean raw mined coal that has not been processed through the coal washing plant at the Deserado mine. Washed coal shall mean coal that has been processed

through the wash plant.

c. Fuel other than during startup or emergencies. Other than during startup or emergencies specified in conditions 3.a and 3.b above, the Permittee is permitted to combust, in the CFB boiler, coal from the Deserado mine consisting of either waste coal alone, or else a blend of waste coal and run-of-mine coal in any ratio yielding up to 6,500 Btu/lb heat content on a 30-day rolling average.

3. Requirements at emergency generator

a. The Permittee shall not combust, in the emergency generator, any fuel other than diesel fuel (#2 grade fuel oil or better). The diesel fuel shall have a sulfur content of no more than 0.05 percent (500 parts per million) by weight.

b. The emergency generator shall be installed, maintained and operated in accordance with the engine manufacturer's instructions and recommendations for ensuring compliance with the "Tier 2" emission standards listed in 40 CFR 89.112, Table 1, and as PSD BACT limits in condition III.D.2 of this permit.

c. The Permittee shall only use the emergency generator:

(i) when routine electrical power to the permitted facility is unavoidably interrupted, and

(ii) for maintenance checks and readiness testing on the generator engine.

Usage shall not exceed 100 hours per 12-month period. Usage for maintenance checks and readiness testing may be excluded from the calculation of 12-month usage, provided that the checks and testing are recommended by the manufacturer, the vendor, or the insurance company associated with the engine.

F. PSD BACT Fugitive Emission Control Requirements

1. All coal, limestone and ash conveyors serving the WCFU shall be fully enclosed.

2. All fugitive emissions generated at coal, limestone and ash conveyor transfer points serving the WCFU, as well as at coal, limestone, ash, lime and inert material storage silos and storage bins serving the WCFU, shall be routed to fabric

filter dust collectors (baghouses or vent filters).

3. All fugitive emissions from unenclosed coal and limestone stockpiles serving the WCFU shall be controlled by compaction of the surface and by application of water sprays and surfactant when warranted. Conditions which warrant application of surfactant or water sprays are defined in this permit as any time a ten percent opacity level is exceeded.

   The Permittee shall conduct weekly Method 22 observations of the coal and limestone stockpiles for visible emissions. If any visible emissions are observed, the Permittee shall conduct a Method 9 visible emission observation within 24 hours, by an observer who is certified in the use of Method 9. If opacity in excess of ten percent is observed by Method 9, the Permittee shall immediately apply dust suppression (water spray and/or surfactant).

4. The coal stockpile loadout shall be equipped with a telescoping chute to enclose the free fall of material during loadout operation and limit the exposure of the material flow stream to the wind.

5. All ash generated by the CFB boiler shall be hydrated, via a pugmill mixer, prior to transfer for disposal.

G. Modeling Limits: The Permittee shall not discharge or cause the discharge of emissions from the CFB boiler to the atmosphere in excess of the following rates used in modeling ambient impacts of the WCFU:

1. 872 pounds per hour of sulfur dioxide, averaged over a 3-hour block period.

2. 202 pounds per hour of sulfur dioxide, averaged over a 24-hour block period.

3. 75.4 pounds per hour of total PM_{10} (filterable plus condensible), averaged over a 24-hour block period.

H. Initial Performance Tests:

1. General requirement. Initial performance tests are required for demonstrating compliance with all PSD BACT emission limits and modeling limits listed in this permit, except as follows:

   a. Exception for emergency generator. Compliance with the operating restrictions and other requirements in conditions III.D.2 and III.E 3 of this permit shall serve as demonstration of compliance with the PSD BACT emission limits in III.D.2.

b. Exception for materials handling baghouses. Initial performance stack tests shall be required only at baghouses OCH/DC-1, EP-W-MH-01 and EP-W-MH-05, but with the following conditions:

If results of the initial performance stack test at EP-W-MH-01 are in excess of the applicable emission limit in this permit, then baghouse EP-W-MH-02 shall also be initially stack tested, within 90 calendar days after initial performance stack test results at EP-W-MH-01 are required under this permit to be submitted to EPA.

If results of the initial performance stack test at EP-W-MH-05 are in excess of the applicable emission limit in this permit, then baghouses EP-W-MH-03, EP-W-MH-08 and EP-W-MH-09 shall also be initially stack tested, within 90 calendar days after initial performance stack test results at EP-W-MH-05 are required under this permit to be submitted to EPA.

2. Test deadlines.

a. CFB boiler. Initial performance testing shall be completed within 60 calendar days after achieving the maximum heat input rate at which the CFB boiler will be operated, but not later than 180 calendar days after the date of initial startup of the boiler, unless a longer timeframe is requested by the Permittee and agreed to by EPA.

b. Materials handling baghouses. Initial performance stack testing at baghouses OCH/DC-1, EP-W-MH-01 and EP-W-MH-05 shall be completed within 60 calendar days after initial startup of each baghouse.

The deadline for submittal of test reports may be found in condition III.L.1.

3. Test protocol. Within 90 calendar days after the date of initial startup of the CFB boiler, and at least 30 calendar days prior to initial performance testing, the Permittee shall submit a test protocol to EPA for all initial performance tests that are required to be conducted under this permit. The test protocol shall outline the proposed test methodologies and procedures to be used. Performance tests shall be conducted in accordance with the test protocol and the test methods specified in this permit, and any changes required by EPA.

4. Test notification: The Permittee shall submit written notification to EPA of the anticipated date of initial performance tests, no less than 30 days prior to commencement of each such test, to provide EPA an opportunity to have an observer present. EPA shall also be notified promptly of any change in the

anticipated date.

5. Representative conditions for testing. Initial performance tests shall be conducted under representative conditions, defined as follows:

   a. CFB boiler. "Representative conditions" shall mean coal is being fed to the boiler during the test which is representative of "average" coal quality in terms of sulfur content (0.34% $\pm$ 0.10%) and heat content (4,000 Btu/lb $\pm$ 500 Btu/lb), and the boiler is operating at no less than 90% of the installed boiler maximum heat input capacity.

   b. Materials handling baghouses. "Representative conditions" shall mean the materials throughput is at no less than 90% of the maximum design throughput, at the materials transfer location where the emissions are controlled by that baghouse, and volumetric flow rate through the baghouse is at no less than 90% of the installed baghouse design flow rate.

6. Test methods:

   a. Particulate matter: For measurement of total filterable particulate matter at the CFB boiler exhaust stack, a particulate matter continuous emission monitoring system (PM CEMS) shall be used. 40 CFR 60, Appendix A, Method 5 or 5D test shall be conducted, in conjunction with 40 CFR 60, Appendix B, Performance Specification 11, to verify CEMS accuracy.

   For measurement of condensible particulate matter at the CFB boiler exhaust stack, 40 CFR 51, Appendix M, Method 202 shall be used. In lieu of Method 202, the Permittee shall be allowed to use Conditional Test Method (CTM) 039. CTM-039 may be found on EPA website at: http://www.epa.gov/ttn/emc/ctm/ctm-039.pdf.

   All particulate matter measured at the CFB boiler exhaust stack (including condensible particulate matter) shall be considered PM_{10}. Separate testing for PM_{10} via Methods 201 or 201A shall not be required unless requested by EPA.

   For measurement of particulate matter at the exhaust stacks of the materials handling system baghouses, Method 5 or 5D shall be used.

   b. Sulfur dioxide (SO_2): For measurement of SO_2 at the CFB boiler exhaust stack, a continuous emission monitoring system (CEMS) shall be used. 40 CFR 60, Appendix A, Method 6, 6A, 6B or 6C test shall be conducted, in conjunction with 40 CFR 60, Appendix B, Performance Specification 2, to

verify CEMS accuracy.

c. Nitrogen oxides (NO_x): For measurement of NO_x at the CFB boiler exhaust stack, a continuous emission monitoring system (CEMS) shall be used. 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D or 7E test shall be conducted, in conjunction with 40 CFR 60, Appendix B, Performance Specification 2, to verify CEMS accuracy.

d. Carbon monoxide (CO): For measurement of CO at the CFB boiler exhaust stack, a continuous emission monitoring system (CEMS) shall be used. 40 CFR 60, Appendix A, Method 10 test shall be conducted, in conjunction with 40 CFR 60, Appendix B, Performance Specification 4, 4A or 4B, to verify CEMS accuracy.

e. Diluent (CO_2 or O_2): For measurement of diluent at the CFB boiler exhaust stack, a continuous monitoring system shall be used. 40 CFR 60, Appendix A, Method 3A or 3C test shall be conducted, in conjunction with 40 CFR 60, Appendix B, Performance Specification 3, to verify accuracy of the diluent Continuous Monitoring System.

For purposes of demonstrating continuous SO_2, NO_x and CO emission compliance under this permit for any period of operation with use of CEMS data, as well as for total filterable particulate matter with use of PM CEMS data, the Permittee may adjust to five percent any measured carbon dioxide (CO_2) diluent values that are below five percent, and may adjust to fourteen percent any measured oxygen (O_2) diluent values that are above fourteen percent, as currently allowed at Acid Rain Units by 40 CFR 72.2 (definition of "diluent cap value"), 40 CFR 75 Appendix A, section 2.1.2.1(b), and 40 CFR 75 Appendix F, section 3.3.4.

f. Sulfuric acid (H_2SO_4): For measurement of H_2SO_4 at the CFB boiler exhaust stack, 40 CFR 60, Appendix A, Method 8 shall be used. In lieu of Method 8, the Permittee shall be allowed to use NCASI Method 8A, published by the National Council for Air and Stream Improvement, Inc. (NCASI), December 1996, available at: http://www.ncasi.org.

g. Sulfur content of coal: ASTM Method D4239, most recent version designated "active" on ASTM website, shall be used.

h. Heat content (gross calorific or Btu content) of coal: ASTM Method D5865, most recent version designated "active" on ASTM website,shall be used.

i. Sulfur content of diesel fuel: ASTM Method D-4294, most recent version designated "active" on ASTM website,shall be used. Records from the fuel supplier, verifying that sulfur content of the diesel fuel is no greater than 0.05%, shall be based on ASTM testing.

j. Visible emissions: 40 CFR 60, Appendix A, Method 9 or 22 shall be used. Situations requiring the use of Method 9 are specified in condition III.I.6.b of this permit.

I. Compliance Provisions

1. PSD BACT emission limits and modeling limits apply at all times. The PSD BACT emission limits in this permit, as well as the modeling limits, apply at all times, including periods of startup, shutdown and malfunction.

2. NSPS exemptions not applicable to emission limits in this permit. The following exemption language in 40 CFR part 60 is not applicable to emission limits in this permit:

a. 40 CFR 60, subpart Da, at §60.48Da(c), §60.48Da(g)(1) and §60.48Da(g)(3), "Compliance provisions," regarding exemptions from emission standards during periods of startup, shutdown, malfunction and emergency conditions.

b. 40 CFR 60, subpart A, at §60.8(c), "Performance tests," regarding exemptions from violation status for excess emissions during periods of startup, shutdown and malfunction.

c. 40 CFR 60, subpart A, at §60.11(c), regarding exemption from opacity standards during periods of startup, shutdown and malfunction.

3. NSPS Subpart A excess emission reporting and recordkeeping requirements not applicable to emission limits in this permit. Language in 40 CFR 60.7, regarding excess emission reporting and recordkeeping, shall not apply to the PSD BACT emission limits or modeling limits in this permit.

4. Continuous compliance demonstrations.

a. During and after initial performance testing, compliance with the PSD BACT emission limit for total filterable particulate matter at the CFB boiler exhaust stack shall be demonstrated on a continuous basis using a Particulate Matter Continuous Emission Monitoring System (PM CEMS).

b. During and after initial performance testing, compliance with the PSD BACT emission limit for total particulate matter (including condensible particulate matter) at the CFB boiler exhaust stack shall be demonstrated on a continuous basis by adding PM CEMS measurements to the results of the most recent stack test for condensible particulate matter. The first stack test for condensible particulate matter shall be conducted as part of initial performance testing required under this permit for total particulate matter. Subsequent tests shall be no less frequent than annually.

"Annually" shall mean each test must be conducted no later than the end of the fourth quarter after the quarter in which the previous test was conducted.

c. During and after initial performance testing, compliance with the PSD BACT emission limits for SO_2, NO_x and CO at the CFB boiler shall be demonstrated on a continuous basis using SO_2, NO_x and CO CEMS.

d. Emissions of SO_2, NO_x and CO at the CFB boiler shall be calculated on a 30-day rolling average basis. At the end of each boiler operating day, a new 30-day rolling average emission rate in lb/MMBtu is calculated from the arithmetic average of all valid hourly emission rates for 30 successive boiler operating days, based on continuous emission monitoring system data and fuel heat input.

Emissions of total particulate matter and total filterable particulate matter shall be calculated on a 24-hour block average basis (midnight to midnight). At the end of each boiler operating day, a new 24-hour average emission rate in lb/MMBtu is calculated from the arithmetic average of all valid hourly emission rates for that day, based on PM CEMS data, fuel heat input, and for total particulate matter, the results of the most recent annual stack test for the condensible portion.

The term "boiler operating day" shall have the meaning given at the beginning of condition III.D of this permit. The term "valid hourly emission rate" shall have the meaning given in 40 CFR 75.10(d)(1):

Hourly averages shall be computed using at least one data point in each fifteen minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly average may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour), if data are unavailable as a result of the performance of calibration, quality assurance, or preventive maintenance activities

pursuant to 40 CFR 75.21 and 40 CFR 75 Appendix B, or backups of data from the data acquisition and handling system, or recertification pursuant to 40 CFR 75.20. The owner or operator shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour.

5. Compliance demonstrations by annual stack test. Compliance with the PSD BACT emission limit for sulfuric acid at the CFB boiler, in condition III.D.1.e of this permit, shall be demonstrated by annual stack tests, using the applicable test method specified in this permit. "Annual" shall mean each test must be conducted no later than the end of the fourth quarter after the quarter in which the previous test was conducted.

   Stack tests for condensible particulate matter at the CFB boiler shall be annual, as specified in condition III.I.4.b of this permit, as part of demonstration of compliance with the PSD BACT emission limit for total particulate matter.

   For the materials handling system baghouses, if results of any initial performance stack test required under condition III.H.1.b of this permit are in excess of the applicable emission limit for that baghouse, the baghouse shall be retested annually. If results of a retest are not in excess of the applicable emission limit, further retests shall not be required.

   Stack tests shall be conducted under "representative conditions" as defined in condition III.H.5 of this permit. Test results shall be expressed as the arithmetic average of three separate test runs. Test results shall be submitted to EPA within 60 calendar days after testing. The first test shall be conducted as part of the initial performance testing required under this permit.

6. Compliance demonstrations for opacity. For demonstrating compliance with the opacity limit of ten percent at the materials handling vent filters and baghouses in condition III.D.3 of this permit, the Permittee shall conduct Method 22 visible emission observations at least once per month, at each vent filter and baghouse. If any visible emissions are observed, both of the following actions shall be taken:

   a. The cause of the visible emissions shall be investigated and any baghouse or vent filter malfunction shall be corrected within three working days in the case of broken or damaged bags, or within seven working days for any other type of baghouse malfunction.

   b. A Method 9 visible emission observation shall be conducted and recorded for that baghouse or vent filter, by an observer who is certified in the use

of Method 9, within 24 hours after visible emissions are observed by Method 22.

If no visible emissions are observed in three consecutive monthly observations, frequency of observation at that baghouse or vent filter may be reduced to quarterly. If visible emissions are observed in any quarterly observation, frequency of observation shall return to monthly.

7. Compliance demonstrations for emission limits in pounds per hour. The Permittee shall use the following procedures for demonstrating compliance with the modeling limits in condition III.G. of this permit:

   a. Sulfur dioxide (SO_2): The output from SO_2 CEMS, in parts per million by volume, shall be multiplied by the output from the continuous volumetric flow rate monitor in the CFB boiler exhaust stack, in actual cubic feet per second. The result shall be averaged over each 3-hour block period and 24-hour block period (midnight to midnight), and appropriate conversion factors shall be applied to yield a result in pounds per hour, on 3-hour block and 24-hour block averages.

   b. Total PM_{10} (filterable plus condensible):

      (i) Filterable portion: The output from the PM CEMS shall be multiplied by the output from the continuous volumetric flow rate monitor in the CFB boiler exhaust stack and the results averaged over each 24-hour block period (midnight to midnight), then appropriate conversion factors applied, to yield a result in pounds per hour on a 24-hour block average. All particulate measured shall be considered PM_{10}.

      (ii) Condensible portion: The results of the latest stack test for condensible particulate matter in pounds per hour shall be used.

      The results of (i) and (ii) above shall be added together to yield total PM_{10}.

   For calculating pounds per hour of emissions under this permit condition, conversion of CEMS measurements into units of lb/MMBtu, and the diluent cap approach described in condition III.H.5.e of this permit, shall not apply.

8. Compliance demonstrations by recordkeeping.

   a. Fuel restrictions at CFB boiler. For demonstrating compliance with the fuel restrictions in condition III.E.3 of this permit, the Permittee shall keep

the following records:

(i) Fuel during startup. Date of each startup and type(s) of fuel used for startup. Where fuel oil is used as startup fuel, records shall include certification from the fuel oil supplier that the sulfur content of the fuel oil is no greater than 0.05 percent.

(ii) Fuel during emergencies when waste coal is not available. Date, cause and duration of each emergency; type of fuel used (run-of-mine coal, washed coal, or any blend of these two fuels).

(iii) Fuel other than during startup and emergencies. The date and the heat content of the as-fired coal, for any days on which the 30-day rolling average heat content of the as-fired coal exceeds 6,500 Btu/lb. This recordkeeping requirement is in addition to any other requirement in this permit to keep records of coal heat content.

b. Emergency generator. For demonstrating compliance with the PSD BACT emission limits, operating requirements and fuel restrictions at the emergency generator engine in conditions III.D.2 and III.E.3 of this permit, the Permittee shall keep the following records:

(i) A copy of the engine manufacturer's "certification of conformity" from EPA, as defined in 40 CFR part 89, that the engine is compliant with the "Tier 2" emission standards in 40 CFR 89.112, Table 1, for engines with rated power more than 560 kilowatts. This record shall be maintained for the life of the engine.

(ii) A copy of the engine manufacturer's instructions and recommendations relating to operation and maintenance of the engine, for minimizing emissions in conformance with "Tier 2" emission standards in 40 CFR 89.112, Table 1, for engines with rated power more than 560 kilowatts. These records shall be maintained for the life of the engine.

(iii) Records of all maintenance performed on the engine. These records shall be created and maintained for each calendar day on which maintenance is performed.

(iv) Records of certification from the fuel oil supplier, for each fuel oil delivery, that the sulfur content of the fuel oil combusted in the engine, as determined by the applicable ASTM Method specified in this permit, is no greater than 0.05 percent.

(v) Records of the dates and hours of operation of the engine and the reason for each usage. Records of hours of engine usage shall include rolling 12-month totals. Records shall also be maintained of any periods of usage due to maintenance checks or readiness testing which are allowed by permit condition III.E.3.c. to be excluded from the calculation of rolling 12-month totals.

c. Fugitive dust control. For demonstrating compliance with the fugitive dust control requirements in condition III.F.3 of this permit, the Permittee shall keep records of all weekly Method 22 visible emission observations, as well as a copy of any Method 9 visible emission observation forms that were filled out, as well as records of any compaction and any application of surfactant sealant and water sprays, at the unenclosed coal and limestone stockpiles serving the WCFU. Records shall include the following information:

(i) Stockpile identification (coal/limestone/location)
(ii) Date of application/compaction
(iii) Weather conditions
(iv) Stockpile surface conditions (dry, crumbled, moist, etc.)

d. Cooling tower. For demonstrating compliance with the requirement in condition III.D.4 of this permit that mist eliminators at the WCFU cooling tower be designed to limit circulating water drift loss to 0.001 percent or less, the Permittee shall keep records from the manufacturer documenting this design feature.

J. Compliance Monitoring Requirements

1. Continuous Monitoring Systems

a. General requirement. The Permittee shall install, calibrate, maintain and operate continuous emission monitoring systems at the CFB boiler exhaust stack, and record the output of the systems, for measuring emissions of total filterable particulate matter, SO_2, NO_x and CO. The Permittee shall also install, calibrate, maintain and operate a diluent (CO_2 or O_2) continuous monitoring system, for measuring the oxygen or carbon dioxide content of the flue gases at the location where the SO_2 or NO_x emissions are monitored. Each continuous monitoring system shall comply with the requirements below.

b. Performance specifications and accuracy. Each continuous monitoring system shall comply with all applicable performance and quality assurance requirements at:

40 CFR 60, subpart A, at §60.13
40 CFR 60, subpart Da
40 CFR 60, Appendix B, Performance Specifications 2, 3, 4 and 11
40 CFR 60, Appendix F
40 CFR 75

Initial Performance Specification testing shall be conducted during the initial performance tests required under condition.III.H.1 of this permit.

c. Quality assurance project plan. Not less than 90 days prior to initial performance testing, the Permittee shall submit to EPA a quality assurance project plan for the certification and operation of each continuous monitoring system. The plan shall comply with 40 CFR 60, Appendix F and 40 CFR 75, Appendix B, and be consistent with requirements of condition III.J.1 of this permit. The plan shall be updated and resubmitted if requested by EPA.

d. Installation. Each continuous monitoring system shall be installed and operational prior to conducting the required initial performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the continuous monitoring systems. Notification of the operational status of each continuous monitoring system shall be provided to EPA within 30 days after the system becomes operational, or by the date on which initial performance testing is commenced, whichever occurs first.

e. Operation and availability. Except for unavoidable monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each continuous monitoring system shall be operated and data recorded during all periods of operation of the CFB boiler, including periods of startup, shutdown, malfunction, or emergency conditions as defined in 40 CFR 60, subpart Da. Each monitoring system shall meet minimum frequency of operation requirements as follows: the continuous monitoring system shall complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period.

f. Data averaging. For continuous monitoring system measurements, one-hour arithmetic averages shall be computed as specified in condition

III.I.4.d of this permit. Thirty-day rolling average emission rates and 24-hour block average emission rates (for compliance with PSD BACT limits) shall be calculated as specified in condition III.I.4.d of this permit. Three-hour and 24-hour block average emission rates (for compliance with modeling limits) shall be calculated as specified in condition III.I.7 of this permit.

g. Calculation of emission rates in lb/MMBtu. The Permittee shall convert pollutant concentration data recorded by the SO_2, NO_x and CO CEMS, as well as data from the PM CEMS, into units of pounds per million Btu of heat input (lb/MMBtu), in accordance with F factors calculated from 40 CFR 60, Appendix A, Method 19, and using data from the diluent monitoring system. The Permittee may use the diluent cap approach described in condition III.H.5.e of this permit. Fuel sampling and analysis shall be conducted for determining F factors, using ASTM Methods specified in this permit.

2. Coal sulfur content and heat content monitoring: For determining the uncontrolled SO_2 emission potential of as-fired coal, and thereby determining the applicable SO_2 BACT emission limit under condition III.D.1.b.(ii) of this permit, the Permittee shall use the following procedure:

The as-fired coal shall be tested each boiler operating day for sulfur content and heat content. Each boiler operating day, the test results shall be used to calculate the uncontrolled SO_2 emission potential of the coal on a 30-day rolling basis, by summing the emission potential in lb/MMBtu for that day's coal with the emission potential in lb/MMBtu calculated for each of the previous 29 boiler operating days and dividing by 30.

K. Additional Recordkeeping Requirements. In addition to the records specified in condition III.I.8 of this permit, the Permittee shall keep all records specified below.

1. The Permittee shall keep a record of all initial performance tests and any subsequent stack tests required by this permit.

2. The Permittee shall keep a record of all information required in the continuous emission compliance reports described in condition III.L.2 of this permit. As stated in condition III.I.3 of this permit, the recordkeeping provisions of 40 CFR 60.7, pertaining to excess emissions measured by CEMS, shall not apply to the PSD emission limits or modeling limits in this permit.

3. The Permittee shall keep a record of all visible emission observations and corrective actions required by condition III.I.6 of this permit. For Method 22

visible emission observations, the records shall identify the baghouses and vent filters observed, the dates of the observations, and whether any visible emissions were detected. For Method 9 observations, the records shall include the Method 9 observation forms that were filled out. Records shall also include the dates and descriptions of any corrective actions required by condition III.I.6.

4. For each continuous monitoring system, the Permittee shall keep a record of the following: all emission measurements, all measurements and other data pertaining to monitoring system performance evaluations, all monitoring device or monitoring system calibration checks, all adjustments and maintenance performed on these systems or devices, and all other monitoring system information required by 40 CFR 60 Appendices B and F, and 40 CFR 75. The Permittee shall also keep a record of any instances where the diluent cap approach allowed by this permit was used.

5. The Permittee shall keep a record of any monitor inoperative periods, repairs or adjustments, for each continuous monitoring system.

6. The Permittee shall keep a record of all measurements of coal sulfur content and heat content required by this permit.

7. The Permittee shall keep a record of the manufacturer's recommended operation and maintenance procedures for all air pollution control equipment at the facility, as well as a record of any written standard operating procedures used at the facility that pertain to emission control or monitoring of emissions.

8. All records, reports, notifications, and support information (i.e. testing, monitoring, measurements, observations, maintenance activities, etc.) compiled in accordance with this permit shall be maintained by the Permittee as a permanent business record for at least five (5) years following the date of the record/report, shall be available for inspection by EPA, and shall be submitted to EPA upon request.

L. Reporting Requirements

1. Initial performance test reports. The Permittee shall submit a written report to EPA of the results of any initial performance test required by this permit within 60 days after completion of the test.

2. Continuous emission compliance reports.

   a. Reports for demonstrating compliance with PSD BACT emission limits on 30-day rolling averages and 24-hour block averages. Within 30 days after

the end of each quarter, the Permittee shall submit written reports to EPA of 30-day rolling average emissions in lb/MMBtu from the CFB boiler for the following pollutants:

- Sulfur dioxide
- Nitrogen oxide
- Carbon monoxide

Within 30 days after the end of each quarter, the Permittee shall submit written reports to EPA of 24-hour block average emissions in lb/MMBtu from the CFB boiler for the following pollutants:

- Total filterable particulate matter (PM CEMS data)
- Total particulate matter (filterable + condensible),

Each report shall identify the pollutant and applicable emission limit and shall include all of the following information for each 24-hour period:

(i) Calendar date.

(ii) For boiler operating days where the applicable SO_2 emission limit is required to be a calculated limit under condition III.D.1.b.(ii)*(b)* of this permit, identification of the emission limit applicable that day and the coal sulfur content and heat content values used by the Permittee for calculating that limit.

(iii) For SO_2, NO_x and CO, the average emission rate in lb/MMBtu for each 30 successive boiler operating days, ending with the last 30-day period in the quarter.

(iv) For total particulate matter and for total filterable particulate matter, the average emission rate in lb/MMBtu for each boiler operating day.

(v) Identification of any periods of non-compliance with the applicable PSD BACT emission limit, reasons for non-compliance, and description of corrective actions taken. Periods of boiler operation during startup, shutdown or malfunctions shall be included in the calculation of average emission rates. No periods of boiler operation may be excluded.

(vi) Identification of any boiler operating days for which pollutant or diluent data have not been obtained by an approved method under

this permit, reasons for not obtaining the data, and description of corrective actions taken.

(vii) Identification of the "F" factor used for calculations, method of determination, type of fuel combusted, and identification of any periods for which the diluent cap approach allowed by this permit was used in calculating emissions in lb/MMBtu.

(viii) Identification of any times when hourly emission averages have been obtained based on manual sampling methods rather than continuous monitoring system data.

(ix) Identification of any times when the pollutant concentration exceeded full span of the continuous monitoring system.

(x) Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with applicable Performance Specifications in 40 CFR 60 Appendix B.

b. Reports for demonstrating compliance with modeling limits in pounds per hour. Within 30 days after the end of each quarter, the Permittee shall submit written reports to EPA of emissions in pounds per hour at the CFB boiler for the following pollutants:

- Total PM_{10} (filterable + condensible), 24-hour block average
- Sulfur dioxide, 3-hour and 24-hour block average

Each report shall identify the pollutant, averaging time, and applicable emission limit and shall include all of the following information:

(i) Date(s) and duration of any emissions not in compliance with the applicable pounds-per hour emission limit in this permit. If no non-compliant emissions occurred during the quarter with regard to an applicable emission limitation, such information shall be stated in the report.

(ii) Magnitude of non-compliant emissions expressed in pounds per hour.

(iii) Reason(s) for the non-compliant emissions and corrective action taken.

(iv) Identification of any boiler operating days for which emissions data in pounds per hour have not been obtained by an approved method under this permit, reasons for not obtaining the data, and description of corrective actions taken.

(v) Identification of any times when emissions data in pounds per hour have been obtained based on manual sampling methods rather than continuous monitoring system data.

(vi) Identification of any times when the pollutant concentration exceeded full span of the continuous monitoring system.

The continuous emission compliance reporting requirements in condition III.L.2 of this permit shall not constitute a waiver of any emission reporting requirements in 40 CFR 60, 75 or 77, nor shall compliance with condition III.L.2 excuse or otherwise constitute a defense to any violation of this permit, or of any applicable law or regulation, that may be caused by the emissions.

3. Continuous monitoring system performance reports. Within 30 days after the end of each quarter, the Permittee shall submit written reports to EPA of the performance of the continuous monitoring systems at the CFB boiler for emissions of total filterable particulate matter, SO_2, NO_x, CO and for diluent (CO_2 or O_2). The report for each monitoring system shall contain the following information:

a. Baseline monitor information: pollutant, monitor manufacturer and model number, date of latest monitor certification or audit;

b. Date(s) and duration of each period during which the monitoring system was inoperative, except for zero and span adjustments and calibration checks;

c. For each period during which the monitoring system was inoperative, reason(s) it was inoperative;

d. Date(s) and duration of each period during which the monitoring system was "out-of-control," as defined in 40 CFR 60, Appendix F, section 5.2.

e. For each period during which the monitoring system was out-of-control, reason(s) it was out of control;

f. Total duration of monitor inoperative and out-of-control periods for the quarter, as a percentage of total boiler operating time for the quarter;

g. For monitor inoperative or out-of-control periods caused by equipment malfunctions, steps and procedures taken to prevent reoccurrence of the malfunctions;

h. Any monitoring system repairs or adjustments, regardless of whether the repairs or adjustments were made to correct an equipment malfunction;

i. Date(s) and results of any Relative Accuracy Test Audits, Cylinder Gas Audits, or Relative Accuracy Audits conducted during the quarter to comply with 40 CFR 60, Appendix F; and

j. If a monitoring system has not been inoperative, repaired or adjusted during the quarter, such information shall be stated in the report for that monitoring system.

The monitoring system performance reporting requirements in this permit shall not constitute a waiver of any monitoring system performance reporting requirements in 40 CFR 60 or 75.

4. Stack test reports. Within 60 calendar days after the stack test is conducted, the Permittee shall submit to EPA a written report of any stack test required by this permit. Each report shall include the following information:

a. Date of test

b. Emitting unit tested

c. Pollutant measured

d. Applicable emission limit

e. Information regarding representative conditions during testing, as follows:

For any stack tests at the CFB boiler:
(i) installed boiler maximum heat input capacity,
(ii) average heat input during the test, as a percent of capacity, and
(iii) average sulfur content and average heat content of coal being fired in the boiler during the test.

For any stack tests at the materials handling baghouses:

(i) installed baghouse design flow rate,

(ii) average flow rate during the test, as a percent of the design flow rate,

(iii) maximum design throughput, at the materials transfer location where the emissions are controlled by that baghouse, and

(iv) actual throughput rate at the materials transfer location, during the test, as a percent of maximum design throughput.

f. Emission measurement results from each test run, expressed in units of the applicable emission limit

g. Sampling and analysis procedures:

(i) Sampling locations

(ii) Test methods used

(iii) Analysis procedures and laboratory identification

h. Quality assurance procedures:

(i) Calibration procedures and frequency

(ii) Sample recovery and field documentation

(iii) Chain-of-custody procedures

i. Data handling and quality control procedures

5. Emergency generator compliance reports. Within six months after initial installation of the emergency generator engine, the Permittee shall submit to EPA a report containing a copy of all records required by conditions III.I.8.b of this permit. Thereafter, within 30 days after the end of each calendar year, the Permittee shall submit to EPA a copy of all records required by conditions III.I.8.b.(iii) and (iv) pertaining to that calendar year.

6. Baghouse and vent filter compliance reports: Within six months after initial startup of the materials handling systems for the WCFU, and within 30 days after the end of each calendar year thereafter, the Permittee shall submit to EPA a report containing all records required by condition III.K.3 of this permit.

7. Fugitive dust control compliance reports. Within six months after initial startup of the materials handling systems for the WCFU, and within 30 days after the end of each calendar year thereafter, the Permittee shall submit to EPA a report containing all records required by condition III.I.8.c of this permit.

8. CFB boiler fuel restriction compliance reports. Within six months after initial startup of the CFB boiler, and within 30 days after the end of each calendar year thereafter, the Permittee shall submit to EPA a report containing the records on CFB boiler fuel required by condition III.I.8.a of this permit.

9. Notification of commencement of construction. Within 15 days after commencement of construction of the WCFU project, the Permittee shall notify EPA in writing that construction has commenced.

10. Addresses. The Permittee shall send all required notifications and reports to:

Program Director
Air and Radiation Program (8P-AR)
U.S. EPA, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

M. New Source Performance Standards (NSPS). The following references to NSPS (40 CFR part 60) are merely intended to cite certain applicable NSPS requirements in summary form. These references are not intended to be a comprehensive and thorough listing of all applicable NSPS requirements.

In addition to the requirements of this permit, the following subparts of 40 CFR part 60 apply to the WCFU:

Subpart A – General Provisions

Subpart Da – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978.

Subpart Y – Standards of Performance for Coal Preparation Plants

N. Title V Permitting Requirements. The following references to permitting requirements under Title V of the Clean Air Act and 40 CFR part 71 are merely intended to cite certain applicable requirements in summary form. These references are not intended to be a comprehensive and thorough listing of all applicable Title V requirements

1. Within twelve (12) months after commencing operation of the WCFU, the Permittee shall submit an application for a Title V Permit to Operate in accordance with 40 CFR part 71.

2. This Permit to Construct and Operate allows the construction and initial operation of the WCFU. The WCFU may be operated under this Permit to Construct and

Operate until the Title V Permit to Operate is issued, unless this permit is suspended or revoked. The WCFU is subject to all applicable Federal, State and Tribal rules, regulations, and orders now or hereafter in effect.

O. Acid Rain Program Requirements. The following references to Acid Rain Program, 40 CFR parts 72 through 78, are merely intended to cite certain applicable requirements in summary form. These references are not intended to be a comprehensive and thorough listing of all applicable Acid Rain Program requirements.

1. Permitting. At least twenty four (24) months before commencing operation of the WCFU, the Permittee shall submit an application for an Acid Rain Program permit in accordance with 40 CFR part 72.

2. Sulfur Dioxide Allowances. The Permittee shall comply with requirements under 40 CFR 72.9(c)(1) and 40 CFR part 73 for affected Acid Rain units to obtain and hold acid rain SO_2 allowances in the unit's compliance subaccount (after any applicable deductions), as of the allowance transfer deadline (defined in 40 CFR 72.2), not less than the total annual emissions of SO_2 for the previous calendar year from the unit, and to comply with the applicable Acid Rain emission limitation for SO_2.

3. Continuous Emission Monitoring Requirements. The Permittee shall comply with applicable continuous emission monitoring requirements under 40 CFR 75.

IV. General Conditions

On the basis of the findings set forth in section II of this permit, and pursuant to the authority (as delegated by the Administrator) of 40 CFR 52.21(u), EPA Region 8 hereby conditionally authorizes Deseret Power Electric Cooperative to construct the Waste Coal Fired Unit at the Bonanza power plant. This authorization is expressly conditioned as follows:

A. Binding Application: This permit is issued in reliance upon the accuracy and completeness of the information set forth in the Applicant=s application to EPA dated November 1, 2004, and subsequent information provided by the Applicant to EPA, as listed in the Administrative Record for issuance of this permit. Appendix A of the Statement of Basis for this permit contains a list of the documents in the Administrative Record.

The Permittee shall abide by all representations, statements of intent and agreements contained in the permit application and subsequent submittals as listed in the Administrative Record. EPA shall be notified no less than ten (10) days in advance of any significant deviation from the permit application as well as any plans, specifications or supporting data furnished. The issuance of this Permit to Construct and Operate may be suspended

or revoked if EPA determines that a significant deviation from the permit application, specifications, and supporting data furnished has been or is to be made.

B. Permit Effective Date: This PSD Permit becomes effective 30 days after the service of notice of the final permit decision, unless review of the permit decision is requested pursuant to 40 CFR 124.19.

C. Enforceability of Permit: On the effective date of this permit, the conditions herein become enforceable by EPA pursuant to any remedies it now has or may have in the future, under the Clean Air Act.

D. Emissions During Construction: The Permittee shall take all reasonable precautions to prevent and or minimize fugitive emissions during the construction period.

E. Initial Notifications: The Permittee shall submit written notification to EPA of the anticipated date of initial start-up of the WCFU, not more than 60 days nor less than 30 days prior to such date. The Permittee shall submit notification to EPA of the actual date of commencement of construction and actual date of initial start-up, within 15 days after each such date. For purposes of this permit, "startup" shall mean the setting in operation of an affected facility for any purpose, and "affected facility' shall mean any apparatus, equipment, or emission unit subject to a standard in this permit, or in the applicable Standards of Performance for New Stationary Sources, found at 40 CFR 60, Subparts A, Da and Y.

F. Applicability of Other Requirements: This permit does not release or excuse the Permittee from compliance with any applicable Federal, Tribal and State regulations, nor from compliance with any other applicable Federal, Tribal and State requirements.

G. Transfer of Ownership: In the event of any changes in control or ownership of the facilities to be constructed under this permit, the permit is binding on all subsequent owners and operators. The Permittee shall notify, by letter, the succeeding owner and operator of the existence of this permit and its conditions. A copy of the letter shall be provided to the EPA. Permit transfers shall be made in accordance with 40 CFR part 122, subpart D.

H. Permit Expiration. As provided for in 40 CFR 52.21(r)(2), approval to construct under this permit shall become invalid if:

1. construction is not commenced within 18 months after receipt of such approval,

2. construction is discontinued for a period of 18 months or more, or

3. construction is not completed within a reasonable time.

The Administrator may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

I. Treatment of Emissions: Emissions in excess of the limits specified in this permit shall constitute a violation.

J. Right of Entry: For purposes of ascertaining compliance with this permit, the EPA Regional Administrator, and/or his authorized representative, upon the presentation of credentials, shall be allowed by the Permittee:

A. To enter the premises where the permitted facility is located, or where any records are required to be kept under the terms and conditions of this permit;

B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit;

C. To inspect any equipment, operation, or method required under this permit; and

D. To sample emissions from the permitted facility.

Authorized By: United States Environmental Protection Agency, Region 8

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Date: 8/30/07