



State of Utah

Department of  
Environmental Quality

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DIVISION OF AIR QUALITY  
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*Lieutenant Governor*

DAQE-AN0102370012-08

March 13, 2008

Reginald Soepnel, Managing Director  
PacifiCorp, Hunter Power Plant  
3 miles South Highway 10  
P.O. Box 569  
Castle Dale, Utah 84513

Dear Mr. Soepnel:

Re: Approval Order: Installation of Pollution Control Equipment, Established Plantwide  
Applicability Limitations and Approval Orders Consolidation, Emery County – CDS A; NSPS;  
PSD; Title IV; Title V Major; HAPs Project Code: N010237-0012

The attached document is the Approval Order for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. John Jenks. He may be reached at (801) 536-4459.

Sincerely,

M. Cheryl Heying, Executive Secretary  
Utah Air Quality Board

MCH:JJ:sa

cc: Southeastern Utah District Health Department

Mike Owens, EPA Region VIII

**STATE OF UTAH**

**Department of Environmental Quality**

**Division of Air Quality**

**APPROVAL ORDER: Installation of Pollution Control  
Equipment, Establishing Plantwide Applicability  
Limitations and Approval Orders Consolidation**

**Prepared By: John Jenks, Engineer  
(801) 536-4459  
Email: [jjenks@utah.gov](mailto:jjenks@utah.gov)**

**APPROVAL ORDER NUMBER**

**DAQE-AN0102370012-08**

**Date: March 13, 2008**

**PacifiCorp, Hunter Power Plant**

**Source Contact  
William Lawson  
(801) 220-4581**

**M. Cheryl Heying  
Executive Secretary  
Utah Air Quality Board**

## Abstract

*PacifiCorp is installing new emissions control equipment at the Hunter Power Plant on Units #1, #2 and #3 boilers in order to substantially reduce plant emissions, mainly sulfur dioxide (SO<sub>2</sub>), H<sub>2</sub>SO<sub>4</sub>, HCl, HF, particulate matter (PM) and nitrogen oxides (NO<sub>x</sub>). PacifiCorp will install on Units #1, #2 and #3 a NO<sub>x</sub> reduction system consisting of two general components: (1) two levels of separated overfire air and (2) new low-NO<sub>x</sub> burners. These changes will result in reduction of NO<sub>x</sub> emissions and possibly result in an increase in CO emissions greater than the PSD significance level. PacifiCorp will also replace the existing electrostatic precipitators (ESP) on Units #1 and #2 with a new pulse jet fabric filter (baghouse) system. This will result in a reduction of H<sub>2</sub>SO<sub>4</sub> and PM emissions. Finally, PacifiCorp will upgrade the existing flue gas desulfurization system on Units #1 and #2 to achieve greater sulfur dioxide removal, which will significantly reduce the amount of SO<sub>2</sub>, HCl, and HF emissions.*

*In addition, PacifiCorp is requesting existing approval orders (AO) be consolidated; plantwide applicability limits (PALs) for SO<sub>2</sub> and NO<sub>x</sub> emissions and for Unit #3 the SO<sub>2</sub> emission limit be set at 0.12 lb/MMBtu. As indicated in the AO DAQE-1189-97, Unit #3 was subject to an emission limit for SO<sub>2</sub> of 0.12lb/MMBtu prior to implementation of the existing limit of 0.10 lb/MMBtu.*

*Opacity limit language for the Unit #1, #2, and #3 boiler stacks is expanded to clarify the opacity limit during startup and shutdown events.*

*As a result of the proposed changes, the source is subject to carbon monoxide (CO) PSD major modification review since the rest of the plant emission changes are reductions. Unit #1 and #2 boilers are subject to New Source Performance Standards (NSPS), Part 60 Subpart D, and the Unit #3 boiler is subject to Subpart Da. Title IV and Title V of the 1990 Clean Air Act apply to this source. The Title V Operating Permit will be updated prior to operating the modified equipment. The source is located in Emery County, which is an attainment area for the National Ambient Air Quality Standards (NAAQS) for all pollutants. This AO has gone through the enhanced NSR process.*

*After the installation and upgrades of the control equipment, the emissions from the plant, in tons per year, will change as follows: PM<sub>10</sub> = (-) 1,441.02, NO<sub>x</sub> = (-) 9,298, SO<sub>2</sub> = (-) 3,609, CO = (+) 17,278, H<sub>2</sub>SO<sub>4</sub> = (-) 33.1, HF = (-) 7.5, and HCl = (-) 27.9.*

*The change in emissions, after the replacement, addition and upgrades of control equipment, will result in the following, in tons per year, potential to emit totals for the plant: PM<sub>10</sub> = 1,218.1, NO<sub>x</sub> = 19,319, SO<sub>2</sub> = 7,187, CO = 18,449, VOC = 163, H<sub>2</sub>SO<sub>4</sub> = 3.5, HF = 44.6, HCl = 13.41, Lead = 0.12 and other HAPs = 43.15.*

*PALs are now established for NO<sub>x</sub> = 19,319 tons/year and SO<sub>2</sub> = 7,187 tons/year based on a 12-month rolling average.*

**General Conditions:**

1. This AO applies to the following PacifiCorp:

Site Office

PacifiCorp Hunter Plant  
3 miles South Highway 10  
P.O. Box 569  
Castle Dale, Utah 84513

Corporate Office Location

PacifiCorp  
1407 West North Temple  
Salt Lake City, Utah 84140

Phone Number (435) 748-5114

(801) 220-2235

Fax Number (435) 748-6579

(801) 220-4307

The equipment listed in this AO shall be operated at the following location:

Approximately three (3) miles south of Castle Dale, Utah on State Highway 10,  
Emery County

Universal Transverse Mercator (UTM) Coordinate System:

4,335.8 kilometers Northing; 497.8 kilometers Easting; Zone 12

UTM Datum NAD27

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.
5. All records referenced in this AO or in applicable NSPS and/or NESHAP and/or MACT standards, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for a minimum of five year periods.
6. PacifiCorp shall install and operate the new Low NO<sub>x</sub> burners, overfire air system, main boiler stack baghouse and upgrade of the existing flue gas desulfurization system on Unit #1 & #2 (each) and new Low NO<sub>x</sub> burner system with OFA on Unit #3. PacifiCorp shall conduct its operations of the Hunter Power Plant in accordance with the terms and conditions of this AO, which was written pursuant to PacifiCorp's Notice of Intent submitted to the Division of Air Quality (DAQ) on May 2, 2007, July 19, 2007, September 17, 2007, September 21, 2007, October 26, 2007, November 27, 2007, December 5, 2007 and December 26, 2007.

7. This AO shall replace the following AOs :

DAQE-1189-97 dated December 18, 1997

Unit #1 dated April 3, 1986

Unit #2 dated July 27, 1987

Unit #3 dated August 31, 1983 and additional letters dated October 27, 1983 and September 6, 1985

8. The approved installations shall consist of the following equipment or equivalent\*:

A. Steam Generating Unit #1

Unit Description: Nominal 480 MW gross capacity, dry bottom, tangentially-fired boiler fired on subbituminous & bituminous coal using distillate fuel oil during start-up and flame stabilization currently equipped with Low NO<sub>x</sub> firing system, ESP and SO<sub>2</sub> FGD scrubber. Boiler will be equipped with a new advanced combustion Low NO<sub>x</sub> burner/overfire air system (OFA), new baghouse and upgraded SO<sub>2</sub> WFGD scrubber, with no scrubber bypass.

B. Steam Generating Unit #2

Unit Description: Nominal 480 MW gross capacity, dry bottom, tangentially-fired boiler fired on subbituminous and bituminous coal using distillate fuel oil during start-up and flame stabilization currently equipped with Low NO<sub>x</sub> firing system, ESP and SO<sub>2</sub> FGD scrubber. Boiler will be equipped with a new advanced combustion Low NO<sub>x</sub> burner/overfire air system (OFA), new baghouse and upgraded SO<sub>2</sub> WFGD scrubber, with no scrubber bypass.

C. Steam Generating Unit #3

Unit Description: Nominal 495 MW gross capacity, dry bottom, wall-fired boiler fired on subbituminous and bituminous coal using distillate fuel oil during start-up and flame stabilization. Unit is equipped with a new Low NO<sub>x</sub> burner system with overfire air, baghouse and SO<sub>2</sub> WFGD scrubber, with no scrubber bypass.

D. Circulating Water Cooling Tower for Unit #1 steam generating boiler

E. Circulating Water Cooling Tower for Unit #2 steam generating boiler

F. Circulating Water Cooling Tower for Unit #3 steam generating boiler

G. Coal Pile and operations and associated fugitive emissions and fugitive dust

H. Coal Conveyors for coal transfer operations

I. Unpaved Ash Haul Road for ash disposal

J. Paved Ash Haul Road for disposal of ash

- K. Ash Landfill operations and associated fugitive emissions and fugitive dust
- L. Unit #1 Emergency Diesel Generator
- M. Unit #2 Emergency Diesel Generator
- N. Unit #3 Emergency Diesel Generator
- O. Emergency Diesel Fire Pump #1
- P. Emergency Diesel Fire Pump #2
- Q. Auxiliary Steam Boiler rated at 211.4 MMBtu/hr fired on fuel oil and constructed in 1976
- R. Coal Silo System Exhauster with centrifugal dust collector for Unit #1 coal silos distribution system
- S. Coal Silo System Exhauster with centrifugal dust collector for Unit #2 coal silo distribution system
- T. Coal Silo System Exhauster with centrifugal dust collector for Unit #3 coal silo distribution system
- U. Lime Silo Bin Vents (water treatment plant) dust collectors for lime storage silos for water treatment plant
- V. Lime Silo Bin Vents (SO<sub>2</sub> scrubber) dust collectors for scrubber lime silos for Units #1, #2, and #3
- W. Four 70,000 distillate fuel oil tanks for the emergency diesel generators and fire pumps
- X. Four 10,000 gallon tanks that store lubricating oil
- Y. Storage area for oil contained in closed 55 gallon drums and totes
- Z. Three 400 gallon electro control hydraulic oil reservoirs
- AA. Paved access road from the plant entrance to the administration building and parking area
- BB. Bench-top cold degreasing units using Safety-Kleen or other comparable degreasing agents
- CC. Miscellaneous Electrical Equipment with some fugitive emission units including transformer insulating oil

- DD. Anhydrous Sulfur Dioxide Tank:  
Unit Description: 10,000 gallon anhydrous sulfur dioxide tank to generate SO<sub>3</sub> for ESP flue gas conditioning. After the baghouse installation, Anhydrous Sulfur Dioxide Tank will be removed from service after the baghouses installation on Units #1 and #2.
- EE. Water Treatment storage tanks including chlorine, aluminum sulfate, lime, sodium sulfite, soda ash, calcium hypochlorite, sodium hydroxide, anti-scale, aqueous ammonia
- FF. Various storage areas for sealed paint containers
- GG. Spray Paint Booth for painting parts to maintain plant
- HH. Gasoline Refueling Station and Storage Tank for fleet vehicles with a 5,500 gallon aboveground tank
- II. 5,500 gallon aboveground unleaded gasoline tank for fleet vehicle refueling
- JJ. Boiler feed pump lube oil conditioners
- KK. Lube oil conditioners with vapor extractors
- LL. Lube oil reservoirs with vapor extractors
- MM. Three 5,500 gallon aboveground diesel tanks and dispensing equipment to refuel vehicles and mobile equipment
- NN. Mobile truck mounted vacuum to clean up spilled material such as ash
- OO. Unit #1 equipment for unloading ash from silos and into trucks for transport to the ash landfill
- PP. Unit #2 equipment for unloading ash from silos and into trucks for transport to the ash landfill
- QQ. Unit #3 equipment for unloading ash from silos and into trucks for transport to the ash landfill

- Equivalency shall be determined by the Executive Secretary.

9. PacifCorp shall notify the Executive Secretary in writing when the installation of the new equipment listed in Condition #8A, B and C has been completed and is operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

**Limitations and Tests Procedures**

10. Unit #1 and Unit #2 Boilers

A Effective upon issuance of the AO:

1. PM limit

- a. Emissions shall not be greater than 0.05 lb/MMBtu heat input from each boiler based on 6-hour averaging period.
- b. Stack testing for the emission limitation shall be performed each year. The source may be tested at any time if directed by the Executive Secretary.

2. NO<sub>x</sub> limits

- a. Emissions from each boiler shall be no greater than 0.70 lb/MMBtu heat input based on a 3-hour averaging period.
- b. Emissions from each boiler shall be no greater than 0.45 lb/MMBtu heat input based on a 12-month rolling averaging period.
- c. Measuring of the NO<sub>x</sub> emissions shall be performed by CEMs.

3. SO<sub>2</sub> limits

- a. Emissions from each boiler shall be no greater than 1.2 lb/MMBtu heat input for any 3-hour period.
- b. Emissions from each boiler shall be no greater than 0.21 lb/MMBtu heat input based on a 12-month rolling average.
- c. Emissions of SO<sub>2</sub> shall be no greater than 20 percent of the potential combustion concentration based on the average inlet and average outlet SO<sub>2</sub> emissions determined as the arithmetic average of all hourly emission rates for the 30 successive boiler operating days.
- d. Measuring of the SO<sub>2</sub> 1.2 lb/MMBtu and 0.21 lb/MMBtu emissions shall be performed by CEMs.

- B. Effective upon installation or upgrade of control equipment:
1. PM limit
    - a. Emissions shall not be greater than 0.015 lb/MMBtu heat input from each boiler based on a 3-test average.
    - b. After the initial stack test is performed, stack testing for the emission limitation shall be performed each year. The source may be tested at any time if directed by the Executive Secretary.
  2. NO<sub>x</sub> limits
    - a. Emissions from each boiler shall be no greater than 0.70 lb/MMBtu heat input based on a 3-hour averaging period.
    - b. Emissions from each boiler shall be no greater than 0.26 lb/MMBtu heat input for a 30-day rolling average.
    - c. After the initial stack test is performed for 0.26 lb/MMBtu measuring of all NO<sub>x</sub> emissions shall be performed by CEMs.
  3. SO<sub>2</sub> limits
    - a. Emissions from each boiler shall be no greater than 1.2 lb/MMBtu heat input for any 3-hour period.
    - b. Emissions from each boiler shall be no greater than 0.12 lb/MMBtu heat input based on a 30-day rolling average.
    - c. Unit #1 and Unit #2 boiler emissions of SO<sub>2</sub> shall be no greater than 20 percent of the potential combustion concentration based on the average inlet and average outlet SO<sub>2</sub> emissions determined as the arithmetic average of all hourly emission rates for the 30 successive boiler operating days.
    - d. After the initial stack test is performed for 0.12 lb/MMBtu limit, measuring of the SO<sub>2</sub> emissions for 0.12 lb/MMBtu and 1.2 lb/MMBtu limits shall be performed by CEMs.
  4. CO limit
    - a. Emission shall be no greater than 0.34 lb/MMBtu heat input for a 30-day rolling average.
    - b. 3990 lb/hr for an 8-hour block average.
    - c. After the initial stack test is performed, measuring of the CO emissions shall be performed by CEMs.

11. Unit #3 Boiler

A Effective upon issuance of the AO:

1. PM limit

- a. Emissions shall not be greater than 0.02 lb/MMBtu heat input from each boiler based on a 6-hour averaging period.
- b. Stack testing for the emission limitation shall be performed each year. The source may be tested at any time if directed by the Executive Secretary.

2. NO<sub>x</sub> limits

- a. Emissions from the boiler shall be no greater than 0.46 lb/MMBtu heat input for a 30-day rolling average.
- b. Measuring of the NO<sub>x</sub> emissions shall be performed by CEMs.

3. SO<sub>2</sub> limits

- a. Emissions of SO<sub>2</sub> from the Unit #3 boiler shall be no greater than 0.12 lb/MMBtu heat input based on a 30-day rolling period.
- b. Boiler #3 emissions of SO<sub>2</sub> shall be no greater than 10 percent of the potential combustion concentration based on the average inlet and average outlet SO<sub>2</sub> emissions determined as the arithmetic average of all hourly emission rates for the 30 successive boiler operating days.
- c. Measuring of the SO<sub>2</sub> 0.10 lb/MMBtu emissions limit shall be performed by CEMs.

B. Effective upon installation or upgrade of control equipment:

1. PM limit

- a. Emissions shall not be greater than 0.02 lb/MMBtu heat input from each boiler based on a 6-hour averaging period.
- b. Stack testing for the emission limitation shall be performed each year. The source may be tested at any time if directed by the Executive Secretary.

2. NO<sub>x</sub> limits

- a. Emissions from each boiler shall be no greater than 0.34 lb/MMBtu heat input for a 30-day rolling average.

- b. After the initial stack test is performed, measuring of NO<sub>x</sub> emissions shall be performed by CEMs.
  - 3. SO<sub>2</sub> limits
    - a. Emissions of SO<sub>2</sub> from the Unit #3 boiler shall be no greater than 0.12 lb/MMBtu heat input based on a 30-day rolling period.
    - b. Boiler #3 emissions of SO<sub>2</sub> shall be no greater than 10 percent of the potential combustion concentration based on the average inlet and average outlet SO<sub>2</sub> emissions determined as the arithmetic average of all hourly emission rates for the 30 successive boiler operating days.
    - c. Measuring of the SO<sub>2</sub> 0.12 lb/MMBtu emissions limit shall be performed by CEMs.
  - 4. CO limit
    - a. Emission shall be no greater than 0.2 lb/MMBtu heat input for a 30-day rolling average.
    - b. 2406 lb/hr for 8-hour block average.
    - c. After the initial stack test is performed, measuring of the CO emissions shall be performed by CEMs.
- 12. Unit #1, #2 and #3 Boilers Compliance and Monitoring:
  - A. The initial test shall be performed as soon as possible and in no case later than 180 days after the start up of each new baghouse on unit #1 and #2 boilers, each advanced combustion Low NO<sub>x</sub> burner/overfire air system, new generation Low NO<sub>x</sub> burner system and each WFGD upgrade. Initial stack testing for PM, NO<sub>x</sub>, and SO<sub>2</sub> shall be performed as specified below. Initial stack testing for the CO, NO<sub>x</sub> and SO<sub>2</sub> emissions in the Conditions 10.B.2.a, 10.B.2.b., 10.B.3.a., 10.B.3.b., 10.B.4.a., 10.B.4.b. ,11.B.2.a. and 11.B.4.a. may be substituted with a RATA test if approved by the Executive Secretary.
  - B. Notification

The Executive Secretary shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary.

C. Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

D. Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary

E. PM<sub>10</sub>

Method 5B shall be used for PM emission or other testing methods approved by the Executive Secretary.

The back half condensibles shall also be tested using the referenced method 202. The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

F. Sulfur Dioxide (SO<sub>2</sub>)

40 CFR 60, Appendix A, Method 6, 6A, 6B, 6C, or other testing methods approved by the Executive Secretary

G. Nitrogen Oxides (NO<sub>x</sub>)

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other testing methods approved by the Executive Secretary

H. Carbon Monoxide (CO)

40 CFR 60, Appendix A, Method 10, or other testing methods approved by the Executive Secretary

I. PacifiCorp shall perform annual stack testing to show compliance with the CO emission limitation after the initial stack testing.

J. PacifiCorp shall install, calibrate, maintain, and operate a continuous monitoring system for measuring carbon monoxide, sulfur dioxide and nitrogen oxides emissions.

13. At all times, the plant-wide applicability limitations for the entire Hunter Plant from all point sources and fugitive emissions shall not exceeded the following:

SO <sub>2</sub> Limit	7,187 tons/year based on 12-months rolling total
NO <sub>x</sub> Limit	19,319 tons/year based on 12-months rolling total

14. SO<sub>2</sub> and NO<sub>x</sub> limits in Condition 13 shall be monitored in accordance with 40 CFR Part 52.21.21(aa)(12) and as minimum it shall be done by summing up emissions as follows:
  - A. For Units #1, #2 and #3 main boiler stacks, PacifiCorp's reporting to EPA's Acid Rain Emissions data base for NO<sub>x</sub> and SO<sub>2</sub> in pounds per hour obtained from the boilers' CEM data shall be used to calculate NO<sub>x</sub> and SO<sub>2</sub> emission rates. All reported SO<sub>2</sub> emissions, including emissions associated with startups, shutdowns, and malfunctions, in pounds per hour, shall be summed to get monthly total emissions.
  - B. For Units #1, #2 and #3 emergency diesel-fired generators, emissions shall be calculated by multiplying the SO<sub>2</sub> and NO<sub>x</sub> emission factor from the latest edition of EPA's emission factors compilation AP-42 and hours of operation. Records documenting generator usage shall be kept in a log, and they shall show the date the generator was used and the duration in hours of generator usage.
  - C. For Units #1, #2 and #3 emergency diesel-fired fire pumps, emissions shall be calculated by multiplying the SO<sub>2</sub> and NO<sub>x</sub> emission factor from the latest edition of EPA's emission factors compilation AP-42 and hours of operation. Records documenting generator usage shall be kept in a log, and they shall show the date the pump was used and the duration in hours of pump usage.
  - D. Auxiliary steam boiler emissions, including emissions associated with startups, shutdowns, and malfunctions, shall be calculated by multiplying the emission factor for SO<sub>2</sub> and NO<sub>x</sub> from the latest edition of EPA's emission factors compilation AP-42 and fuel consumption. Records documenting Auxiliary steam boiler usage shall be kept in a log, and they shall show the date the Auxiliary steam boiler was used and the duration in hours of the Auxiliary steam boiler usage.
  - E. The PAL limits in Condition 13 shall be effective for ten years from the date of issuance of this AO, in accordance with 40 CFR Subpart 52.21(aa).
  - F. If PacifiCorp applies for PAL renewal, the application in accordance with 40 CFR Subpart 52.21(aa)(10) shall be submitted before the end of the PAL effective date, and the PAL established in this AO will remain until a revised approval order is issued.
  - G. Once the PAL expires, the source is subject to the requirements of 40 CFR Subpart 52.21(aa)(9).
  - H. Monitoring for each PAL shall be in accordance with 40 CFR Subpart 52.21(aa)(12).
  - I. For the record keeping requirements of each PAL, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(13).
  - J. For record submittal, PacifiCorp shall comply with 40 CFR Subpart 52.21(aa)(14).

15. To determine compliance with the applicable 12-month rolling NO<sub>x</sub> and SO<sub>2</sub> PAL limits, the owner/operator shall calculate new 12-month total NO<sub>x</sub> and SO<sub>2</sub> emissions by the twentieth day of each month using data from the previous 12 months. Records of emissions shall be kept for all periods when the plant is in operation.
  
16. Visible emissions from Hunter Unit #1, Unit #2 and Unit #3 boilers shall be limited as follows:
  - During boiler operation, no greater than 20 percent opacity, except as provided in R307-201-3(7). During startup and shutdown events Condition 18 and Condition 26 shall apply.
  
17. PacifiCorp shall develop, maintain, and implement a written Hunter Emissions Minimization Plan (Hunter Plan) that describes, in detail, procedures for operating and maintaining the Units #1, #2 and #3 boilers, including associated air pollution control and monitoring equipment, during events of startup and shutdown. The Plan shall be submitted to the Executive Secretary no later than 180 days after the issuance of this AO.
  
18. Definition of startup and shutdown events for Unit #1, Unit #2 and Unit #3 boilers and the Hunter Plan minimum requirements:
  - A. Startup is defined as the period beginning with the introduction of fuel into the boiler and ending no later than when two coal feeders have been proven in service and the flue gas temperature at the outlet ducts to both sides of the electrostatic precipitator (Units #1 and #2) or the baghouse outlet (Units #1, #2 or #3 boilers) have reached a temperature of 220°F and less than 20 percent of the boiler heat input is being furnished by fuel oil.
  - B. Bypass of associated control equipment shall only be used to prevent loss of life, personal injury, or severe property damage.
  - C. Shutdown is defined as the period beginning when the unit load or output is reduced with the intent of removing the unit from service, or when the unit trips as the result of a sudden and unforeseen failure or malfunction and ending when fuel flow to the boiler ceases.
  - D. The Hunter Plan shall contain detailed steps to minimize, to the maximum extent practicable, the frequency and duration of operation in startup or shutdown and shall be followed at all times. The Hunter Plan shall contain steps to minimize, to the maximum extent practicable, the frequency and duration of operation in startup or shutdown mode. This shall include, but not necessarily be limited to, careful and detailed design, planning, operation, and maintenance so as to avoid unnecessary, preventable, or unreasonably frequent or lengthy startups and shutdowns.
  - E. The duration of a boiler startup event shall not extend beyond 20 hours per startup period or 300 hours per year per boiler and 750 hours per year combined for the Unit #1, #2 and #3 boilers.

- F. During periods of startup and shutdown, PacifiCorp shall operate and maintain the boilers, including associated air pollution control and monitoring equipment, in accordance with procedures specified in the Hunter Plan based on equipment manufacturer/plant operating procedures.
  - G. PacifiCorp shall maintain records demonstrating that the procedures in the Hunter Plan were followed. These records shall include the date and time of occurrence and duration of each startup and shutdown, include emissions during startup and shutdown as well as other pertinent information.
  - H. PacifiCorp may periodically revise the Hunter Plan for the affected source as necessary to satisfy the requirements of this Condition or to reflect changes in equipment or procedures at the affected source. Each such revision must be submitted to the Executive Secretary.
19. Unless otherwise specified in this AO, visible emissions from any stationary point, other than main stacks, or fugitive emission source associated with the source or with the control facilities shall not exceed 20% opacity. Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.
- For those sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.
20. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emission determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply.
21. Fugitive dust and emissions shall be minimized by the following techniques:
- A. All conveyors and drop points shall be enclosed in a structure.
  - B. The live coal handling and storage shall be enclosed in a structure.

**Fuels**

22. The sulfur content of any fuel oil shall not exceed 0.85 lbs/MMBtu heat input. The sulfur content shall be determined by ASTM Methods D2015-77 or D3286-85 or approved equivalent.

**Federal Limitations and Requirements**

23. In addition to the requirements of this AO, all applicable provisions of 40 CFR Part 60, NSPS Subparts A, 40 CFR 60.1 to 60.18, Subpart D, 40 CFR Part 60.40 to 60.46 (Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971), Subpart Da (Standards of Performance for Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978) and Subpart HHHH (Emission Guidelines and Compliance Times for Coal-fired Electric Steam Generating Units) apply to this installation.

24. In addition to the requirements of this AO, all applicable provisions of 40 CFR Part 72, 73, 75, 76, 77 and 78 - Federal regulations for the Acid Rain Program under Clean Air Act Title IV apply to this installation.
25. In addition to the requirements of this AO, all applicable provisions of 40 CFR Part 52.21 (aa)-Actuals Pals (incorporated by reference in the UAC, R307-405-2) apply to this installation.

### **Monitoring - General Process**

26. The owner/operator shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMs) on the main boilers stacks for CO, SO<sub>2</sub>, and NO<sub>x</sub>. The owner/operator shall record the output of the system, for measuring the opacity, CO, SO<sub>2</sub>, and NO<sub>x</sub> emissions. The monitoring system shall comply with all applicable sections of R307-170, UAC; and 40 CFR 60, Appendix B.

All continuous emissions monitoring devices as required in federal regulations, and state rules shall be installed and operational prior to placing the affected source in operation.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the owner/operator of an affected source shall continuously operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section UAC R307-170.

### **Records & Miscellaneous**

27. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.
28. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
29. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if PacifiCorp is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Approved By:

M. Cheryl Heying, Executive Secretary  
Utah Air Quality Board