



STATE OF NEVADA
BUREAU OF AIR POLLUTION CONTROL

NO. AP4911-0897

CLASS I AIR QUALITY OPERATING PERMIT
SPECIFIC REQUIREMENTS

Issued to: Nevada Power Company—Reid Gardner Station Power Plant, as Permittee

Section VI. Specific Operating Conditions

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired. UTM: North 4059.35 km, East 711.68 km (Zone 11)*

System 01A Reid Gardner Unit #1 Steam Boiler, Coal Fired.

S2.001 Steam Boiler, Foster Wheeler, Model # 5757, Serial # 36-4109, Manufactured April, 1965. 1,215 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Air Pollution Equipment
Emissions from **S2.001** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 25,000,000 standard cubic feet per hour (SCFH):
 - a. Mechanical fly ash collectors for the control of particulate matter.
 - b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
 - c. Low NO_x coal burners and over-fired air.The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits
 - a. On and after the date of startup of **S2.001**, *the Permittee* will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.001**, the following pollutants in excess of the following specified limits:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (3) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 729.0 pounds per hour.
 - (4) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 729.0 pounds per hour.
 - (5) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number One of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
 - (6) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).
 - (7) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.001** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
 - (8) NAC 445B.22017 State-Only Requirement - The opacity from **S2.001** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
 - (9) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.001** may exceed the level set in A.2.a.(8) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.



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Section VI. Specific Operating Conditions (continued)

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired (continued)*

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

- (1) *The Permittee* will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.001 SO ₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.001 NO _x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

- (2) *The Permittee* will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. **S2.001** will combust sub-bituminous and/or bituminous coal only when operating under this operating scenario.
b. **S2.001** may operate a total of 8,760 hours per calendar year.
c. The maximum operating heat input rate for **S2.001** while combusting sub-bituminous and/or bituminous coal will not exceed 1,215 million Btu per any one-hour period.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

Within 180 days of the date of issuance of this operating permit, and once annually thereafter, *The Permittee* will:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.001** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch.
(2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.001** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by a Method 5 performance test, including the back-half catch. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
(3) Conduct and record a Method 6 or 6C performance test for SO₂ on the exhaust stack of **S2.001** consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*).



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Section VI. Specific Operating Conditions (continued)

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired (continued)*

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (4) The performance tests will be conducted at the maximum operating heat input rate limit established in A.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. *The Permittee* shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (5) *The Permittee* shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4).
- (6) During each performance test required in A.4.a.(1) through (3) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 or 6C performance test for SO₂ must be converted to emissions of sulfur (both lb/hr and lb/MMBtu). The emissions results of the Method 5 performance test for PM and method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (7) As a result of the most recent performance test performed in A.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.

- (8) Within 60 days after completing the performance tests contained in A.4.a. of this section, *the Permittee* shall furnish the director a written report of the results of the performance tests and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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Section VI. Specific Operating Conditions (continued)

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired (continued)*

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.001**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.001**.
- (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device required in A.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
- (3) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (4) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (5) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring system) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.001**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.001** to accurately and continuously measure the SO₂ concentration in **S2.001** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (6) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in A.4.b.(4) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (7) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.001**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.001** to accurately and continuously measure the opacity of **S2.001** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267 and 40 CFR Part 75.10.
- (8) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in A.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 75.10 and 40 CFR Part 75.14.



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Section VI. Specific Operating Conditions (continued)

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired (continued)*

c. **Recordkeeping**

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.001** is operating:

- (1) The total hourly quantity of sub-bituminous and/or bituminous coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in A.4.b.(2) of this section.
- (2) The total daily hours of operation for the corresponding date.
- (3) The heat content of the sub-bituminous and/or bituminous coal combusted for the corresponding date, in Btu per ton (Btu/ton). The heat content of the sub-bituminous and/or bituminous coal will be based on the gross calorific value determined in A.4.b.(4) of this section.
- (4) The hourly heat input of the sub-bituminous and/or bituminous coal combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in A.4.c.(2) of this section, and the heat content of the fuel as recorded in A.4.c.(3) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

- (5) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the heat content of the fuel determined in A.4.b.(4) of this section, and the emission factor derived in A.4.a.(7) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

- (6) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in A.4.b.(6) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (7) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in A.4.b.(8) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
 - (i). Each 6-minute average as required in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).



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Section VI. Specific Operating Conditions (continued)

A. *Emission Unit #S2.001 - Primary Operating Scenario: 100% Coal Fired (continued)*

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests required in A.4.a.(8) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in A.2.a.(6) of this section.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

B. *Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil.*

UTM: North 4059.35 km, East 711.68 km (Zone 11)

System 01B Reid Gardner Unit #1 Steam Boiler, Coal Firing and No. 2 Distillate Fuel Oil.

S2.001 Steam Boiler, Foster Wheeler, Model # 5757, Serial # 36-4109, Manufactured April, 1965. 1,215 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Air Pollution Equipment

Emissions from **S2.001** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 25,000,000 standard cubic feet per hour (SCFH):

- a. Mechanical fly ash collectors for the control of particulate matter.
- b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
- c. Low NO_x coal burners and over-fired air.

The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits

- a. On and after the date of startup of **S2.001**, *the Permittee* will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.001**, the following pollutants in excess of the following specified limits while operating under this alternative operating scenario:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (3) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
 - (4) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
 - (5) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating unit Number One of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
 - (6) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).
 - (7) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.001** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
 - (8) NAC 445B.22017 State-Only Requirement - The opacity from **S2.001** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
 - (9) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.001** may exceed the level set in B.2.a.(8) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.



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Section VI. Specific Operating Conditions (continued)

B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

- (1) *The Permittee* will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.001 SO ₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.001 NO _x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

- (2) *The Permittee* will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. While operating under this alternative operating scenario, **S2.001** may co-fire sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil for purposes of startup, shutdown and/or flame stabilization only.
- b. **S2.001** may operate a total of 8,760 hours per calendar year.
- c. The maximum operating heat input rate for **S2.001** while co-firing sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil will not exceed 1,215 million Btu per any one-hour period.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

For each calendar year *The Permittee* operates **S2.001** more than 500 hours under this alternative operating scenario, *The Permittee* will perform the following testing no later than 60 days after reaching the 500 hours of operation:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.001** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch.
- (2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.001** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by a Method 5 performance test, including the back-half catch. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
- (3) Conduct and record a Method 6 or 6C performance test for SO₂ on the exhaust stack of **S2.001** consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*).



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Section VI. Specific Operating Conditions (continued)

B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (4) The performance tests will be conducted at the maximum operating heat input rate limit established in B.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. **The Permittee** shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (5) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4).
- (6) During each performance test required in B.4.a.(1) through (3) of this section, record the quantity (in tons) of coal combusted, the No. 2 distillate fuel oil (in-pounds-mass), the heat content value of the coal (in Btu per ton) and No. 2 distillate fuel oil (in Btu per pound) combusted during each test run (in Btu per ton) and include these data in the test results submitted. The oil sampling and analysis procedures contained in 40 CFR Part 75, Appendix D, Section 2.2.4 will be used to determine the No.2 distillate fuel oil parameters. The emissions results of the Method 6 or 6C performance test for SO₂ must be converted to emissions of sulfur (both lb/hr and lb/MMBtu). The emissions results of the Method 5 performance test for PM and Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (7) As a result of the most recent performance test performed in B.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).
 - (iii). Pounds of PM per ton of No. 2 distillate fuel oil (lbs-PM/lbm-No. 2 Distillate).
 - (iv). Pounds of PM₁₀ per ton of No. 2 distillate fuel oil (lbs-PM₁₀/lbm-No. 2 Distillate)

These emissions factors will be based on the average of the 3 test runs.

- (8) Within 60 days after completing the performance tests contained in B.4.a. of this section, **the Permittee** shall furnish the director a written report of the results of the performance tests and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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Section VI. Specific Operating Conditions (continued)

B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.001**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.001**.
- (2) Install, calibrate, operate and maintain a fuel flow meter to continuously record the mass amount (in pounds-mass) of No. 2 distillate fuel oil combusted in **S2.001**. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.001** in accordance with the requirements prescribed in 40 CFR Part 75.
- (3) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device and the mass amount (in pounds-mass) of the No. 2 distillate fuel oil as measured by the fuel flow meter required in B.4.b.(1) and (2) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 75.
- (4) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (5) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (6) Using either the Flow Proportional or Daily Method described in 40 CFR Part 75, Appendix D 2.2.2, 2.2.3, or 2.2.4 prepare a daily sample representative of the No. 2 distillate fuel oil combusted in **S2.001** for each day of operation while combusting that fuel. The sulfur content of the daily fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D. The fuel oil gross calorific value of this daily sample will be determined in accordance with ASTM D240-87 (Re-approved 1991), "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter" or ASTM D2382-88, "Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method) and the requirements prescribed in 40 CFR Part 75, Appendix F, Section 3.3.6.2." Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.
- (7) Substitute any missing fuel flow meter data in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.2. Substitute any missing sulfur content data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1. Substitute any missing gross calorific value data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1.



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Section VI. Specific Operating Conditions (continued)

B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

b. Monitoring (continued)

- (8) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring system) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.001**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.001** to accurately and continuously measure the SO₂ concentration in **S2.001** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (9) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in B.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (10) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.001**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.001** to accurately and continuously measure the opacity of **S2.001** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267 and 40 CFR Part 75.10.
- (11) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in B.4.b.(10) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 75.10 and 40 CFR Part 75.14.

c. Recordkeeping

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.001** is operating under this alternative operating scenario:

- (1) The name of the operating scenario, the type(s) of fuel(s) combusted and the calendar date of any required monitoring, including the date and time of switching from one operating scenario to another.
- (2) The total hourly quantity of co-fired sub-bituminous and/or bituminous coal (in tons) and the mass amount of No. 2 distillate fuel oil in pounds-mass (lbm) combusted, for each hour of operation based on the data recorded by the CDCS as required in B.4.b.(3) of this section.
- (3) The total daily hours of operation for the corresponding date.
- (4) The heat content of each fuel combusted for the corresponding date, in Btu/ton (coal) and Btu/pound (No. 2 distillate fuel oil). The heat content for each fuel will be based on the gross calorific value determined in B.4.b.(5) & (6) of this section.
- (5) The hourly heat input of the co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in B.4.c.(2) of this section, and the heat content of the fuel as recorded in B.4.c.(4) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

$$(\text{lbm-No. 2 Distillate/hr})(\text{Btu/lbs}) = \text{Btu/hr or MMBtu/hr - No. 2 Distillate}$$

Sum:

$$\text{MMBtu/hr - Coal} + \text{MMBtu/hr - No. 2 Distillate} = \text{Hourly Heat Input in MMBtu/hr}$$



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Section VI. Specific Operating Conditions (continued)

- B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)**
c. Recordkeeping (continued)

- (6) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the hourly quantity of co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil determined in B.4.b.(3) of this section, and the emission factor derived in B.4.a.(7) of this section.

Sample Calculation:

$$\begin{aligned} (\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) &= \text{lbs-PM/Btu or lbs-PM/MMBtu} \\ (\text{lbm-No. 2 Distillate/Btu})(\text{lbs-PM/lbm-No. 2 Distillate}) &= \text{lbs-PM/Btu or lbs-PM/MMBtu - No. 2 Distillate} \end{aligned}$$

Sum:

$$\text{lbs-PM/MMBtu - Coal} + \text{lbs-PM/MMBtu - No. 2 Distillate} = \text{Hourly Emission Rate in lbs-PM/MMBtu}$$

- (7) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in B.4.b.(8) of this section, for each averaging period described below:
- The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in B.4.b.(10) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
- Each 6-minute average as required in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).



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Section VI. Specific Operating Conditions (continued)

B. Emission Unit #S2.001 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

d. Reporting

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in B.4.a.(8) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in B.2.a.(6) of this section.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions (continued)

C. *Emission Unit #S2.002. Primary Operating Scenario: 100% Coal Fired. UTM: North 4059.32 km, East 711.68 km (Zone 11)*

System 02A Reid Gardner Unit No. 2 Steam Boiler, Coal Fired.

S2.002 *Steam Boiler, Foster Wheeler, Model # 2-79-2106, Serial # 08-6374, Manufactured July 1968. 1,215 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.*

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Air Pollution Equipment
Emissions from **S2.002** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 25,000,000 standard cubic feet per hour (SCFH):
 - a. Mechanical fly ash collectors for the control of particulate matter.
 - b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
 - c. Low NO_x coal burners and over-fired air.The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.
2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits
 - a. On and after the date of startup of **S2.002**, the Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.002**, the following pollutants in excess of the following specified limits:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (3) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 729.0 pounds per hour.
 - (4) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 729.0 pounds per hour.
 - (5) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating unit Number Two of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
 - (6) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).
 - (7) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.002** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
 - (8) NAC 445B.22017 State-Only Requirement - The opacity from **S2.002** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
 - (9) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.002** may exceed the level set in C.2.a.(8) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.



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Section VI. Specific Operating Conditions (continued)

C. *Emission Unit #S2.002 - Primary Operating Scenario: Coal Fired (continued)*

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

- (1) *The Permittee* will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.002 SO ₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.002 NO _x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

- (2) *The Permittee* will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. **S2.002** will combust sub-bituminous and/or bituminous coal only when operating under this operating scenario.
b. **S2.002** may operate a total of 8,760 hours per calendar year.
c. The maximum operating heat input rate for **S2.002** while combusting sub-bituminous and/or bituminous coal will not exceed 1,215 million Btu per any one-hour period.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

Within 180 days of the date of issuance of this operating permit, and once annually thereafter, *The Permittee* will:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.002** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch.
(2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.002** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by a Method 5 performance test, including the back-half catch. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
(3) Conduct and record a Method 6 or 6C performance test for SO₂ on the exhaust stack of **S2.002** consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*).



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C. Emission Unit #S2.002 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (4) The performance tests will be conducted at the maximum operating heat input rate limit established in C.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. **The Permittee** shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (5) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4).
- (6) During each performance test required in C.4.a.(1) through (3) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 or 6C performance test for SO₂ must be converted to emissions of sulfur (both lb/hr and lb/MMBtu). The emissions results of the Method 5 performance test for PM and Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (8) As a result of the most recent performance test performed in C.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.

- (8) Within 60 days after completing the performance tests contained in C.4.a. of this section, **the Permittee** shall furnish the director a written report of the results of the performance tests and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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Section VI. Specific Operating Conditions (continued)

C. Emission Unit #S2.002 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.002**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.002**.
- (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device required in C.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
- (3) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (4) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (5) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring system) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.002**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.002** to accurately and continuously measure the SO₂ concentration in **S2.002** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (6) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in C.4.b.(5) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (7) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.002**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.002** to accurately and continuously measure the opacity of **S2.002** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267 and 40 CFR Part 75.10.
- (8) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in C.4.b.(7) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 75.10 and 40 CFR Part 75.14.



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Section VI. Specific Operating Conditions (continued)

C. Emission Unit #S2.002 - Primary Operating Scenario: 100% Coal Fired (continued)

c. Recordkeeping

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.002** is operating under this operating scenario:

- (1) The total hourly quantity of sub-bituminous and/or bituminous coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in C.4.b.(2) of this section.
- (2) The total daily hours of operation for the corresponding date.
- (3) The heat content of the sub-bituminous and/or bituminous coal combusted for the corresponding date, in Btu per ton (Btu/ton). The heat content of the sub-bituminous and/or bituminous coal will be based on the gross calorific value determined in C.4.b.(4) of this section.
- (4) The hourly heat input of the sub-bituminous and/or bituminous coal combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in C.4.c.(1) of this section, and the heat content of the fuel as recorded in C.4.c.(3) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

- (5) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the heat content of the fuel determined in C.4.b.(4) of this section, and the emission factor derived in C.4.a.(7) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

- (6) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in C.4.b.(6) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (7) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in C.4.b.(8) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
 - (i). Each 6-minute average as required in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).



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Section VI. Specific Operating Conditions (continued)

C. Emission Unit #S2.002 - Primary Operating Scenario: 100% Coal Fired (continued)

d. Reporting

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in C.4.a.(8) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in C.2.a.(6) of this section.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

D. *Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil.*

UTM: North 4059.35 km, East 711.68 km (Zone 11)

System 02B Reid Gardner Unit No. 2 Steam Boiler, Coal Firing and No. 2 Distillate Fuel Oil.

S2.002 Steam Boiler, Foster Wheeler, Model # 2-79-2106, Serial # 08-6374, Manufactured July 1968. 1,215 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Air Pollution Equipment

Emissions from **S2.002** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 25,000,000 standard cubic feet per hour (SCFH):

- a. Mechanical fly ash collectors for the control of particulate matter.
- b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
- c. Low NO_x coal burners and over-fired air.

The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits

a. On and after the date of startup of **S2.002**, the *Permittee* will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.002**, the following pollutants in excess of the following specified limits while operating under this alternative operating scenario:

- (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
- (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
- (3) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
- (4) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
- (5) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number Two of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
- (6) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).
- (7) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.002** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- (8) NAC 445B.22017 State-Only Requirement - The opacity from **S2.002** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
- (9) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.002** may exceed the level set in D.2.a.(8) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.



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Section VI. Specific Operating Conditions (continued)

D. Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

- (1) *The Permittee* will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.002 SO ₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.002 NO _x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

- (2) *The Permittee* will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. While operating under this alternative operating scenario, **S2.002** may co-fire sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil for purposes of startup, shutdown and/or flame stabilization only.
- b. **S2.002** may operate a total of 8,760 hours per calendar year.
- c. The maximum operating heat input rate for **S2.002** while co-firing sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil will not exceed 1,215 million Btu per any one-hour period.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

For each calendar year *The Permittee* operates **S2.002** more than 500 hours under this alternative operating scenario, *The Permittee* will perform the following testing no later than 60 days after reaching the 500 hours of operation:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.002** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch.
- (2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.002** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by a Method 5 performance test, including the back-half catch. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
- (3) Conduct and record a Method 6 or 6C performance test for SO₂ on the exhaust stack of **S2.002** consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*).



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Section VI. Specific Operating Conditions (continued)

D. Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (4) The performance tests will be conducted at the maximum operating heat input rate limit established in D.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. **The Permittee** shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (5) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4).
- (6) During each performance test required in D.4.a.(1) through (3) of this section, record the quantity (in tons) of coal combusted, the No. 2 distillate fuel oil (in-pounds-mass), the heat content value of the coal (in Btu per ton) and No. 2 distillate fuel oil (in Btu per pound) combusted during each test run (in Btu per ton) and include these data in the test results submitted. The oil sampling and analysis procedures contained in 40 CFR Part 75, Appendix D, Section 2.2.4 will be used to determine the No.2 distillate fuel oil parameters. The emissions results of the Method 6 or 6C performance test for SO₂ must be converted to emissions of sulfur (both lb/hr and lb/MMBtu). The emissions results of the Method 5 performance test for PM and Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (7) As a result of the most recent performance test performed in D.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).
 - (iii). Pounds of PM per ton of No. 2 distillate fuel oil (lbs-PM/lbm-No. 2 Distillate).
 - (iv). Pounds of PM₁₀ per ton of No. 2 distillate fuel oil (lbs-PM₁₀/lbm-No. 2 Distillate).

These emissions factors will be based on the average of the 3 test runs.

- (8) Within 60 days after completing the performance tests contained in D.4.a. of this section, **the Permittee** shall furnish the director a written report of the results of the performance tests and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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Section VI. Specific Operating Conditions (continued)

D. Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.002**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.002**.
- (2) Install, calibrate, operate and maintain a fuel flow meter to continuously record the mass amount (in pounds-mass) of No. 2 distillate fuel oil combusted in **S2.002**. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.002** in accordance with the requirements prescribed in 40 CFR Part 75.
- (3) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device and the mass amount (in pounds-mass) of the No. 2 distillate fuel oil as measured by the fuel flow meter required in D.4.b.(1) & (2) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 75.
- (4) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (5) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (6) Using either the Flow Proportional or Daily Method described in 40 CFR Part 75, Appendix D 2.2.2, 2.2.3, or 2.2.4 prepare a daily sample representative of the No. 2 distillate fuel oil combusted in **S2.002** for each day of operation while combusting that fuel. The sulfur content of the daily fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D. The fuel oil gross calorific value of this daily sample will be determined in accordance with ASTM D240-87 (Re-approved 1991), "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter" or ASTM D2382-88, "Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method) and the requirements prescribed in 40 CFR Part 75, Appendix F, Section 3.3.6.2." Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.
- (7) Substitute any missing fuel flow meter data in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.2. Substitute any missing sulfur content data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1. Substitute any missing gross calorific value data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1.



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Section VI. Specific Operating Conditions (continued)

D. Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

b. Monitoring (continued)

- (8) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring system) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.002**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.002** to accurately and continuously measure the SO₂ concentration in **S2.002** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (9) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in D.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2 (*PSD permit requirement VIII.D.2.a. issued January 3, 1980*), 40 CFR Part 75, Part 75.11 and Appendix F.
- (10) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.002**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.002** to accurately and continuously measure the opacity of **S2.002** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267 and 40 CFR Part 75.10.
- (11) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in D.4.b.(10) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 75.10 and 40 CFR Part 75.14.

c. Recordkeeping

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.002** is operating under this alternative operating scenario:

- (1) The name of the operating scenario, the type(s) of fuel(s) combusted and the calendar date of any required monitoring, including the date and time of switching from one operating scenario to another.
- (2) The total hourly quantity of co-fired sub-bituminous and/or bituminous coal (in tons) and the mass amount of No. 2 distillate fuel oil in pounds-mass (lbm) combusted, for each hour of operation based on the data recorded by the CDCS as required in D.4.b.(3) of this section.
- (3) The total daily hours of operation for the corresponding date.
- (4) The heat content of each fuel combusted for the corresponding date, in Btu/ton (coal) and Btu/pound (No. 2 distillate fuel oil). The heat content for each fuel will be based on the gross calorific value determined in D.4.b.(5) & (6) of this section.
- (5) The hourly heat input of the co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in D.4.c.(2) of this section, and the heat content of the fuel as recorded in D.4.c.(4) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

$$(\text{lbm-No. 2 Distillate/hr})(\text{Btu/lbs}) = \text{Btu/hr or MMBtu/hr - No. 2 Distillate}$$

Sum:

$$\text{MMBtu/hr - Coal} + \text{MMBtu/hr - No. 2 Distillate} = \text{Hourly Heat Input in MMBtu/hr}$$



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D. *Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)*

c. **Recordkeeping (continued)**

- (6) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the hourly quantity of co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil determined in D.4.b.(3) of this section, and the emission factor derived in D.4.a.(7) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

$$(\text{lbn-No. 2 Distillate/Btu})(\text{lbs-PM/lbn-No. 2 Distillate}) = \text{lbs-PM/Btu or lbs-PM/MMBtu - No. 2 Distillate}$$

Sum:

$$\text{lbs-PM/MMBtu - Coal} + \text{lbs-PM/MMBtu - No. 2 Distillate} = \text{Hourly Emission Rate in lbs-PM/MMBtu}$$

- (7) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in D.4.b.(8) of this section, for each averaging period described below:
- The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in D.4.b.(10) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
- Each 6-minute average as required in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).



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Section VI. Specific Operating Conditions (continued)

D. Emission Unit #S2.002 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in D.4.a.(8) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in D.2.a.(6) of this section.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

(7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (USEPA) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

E. *Emission Unit #S2.003. Primary Operating Scenario: 100% Coal Fired. UTM: North 4059.28 km, East 711.68 km (Zone 11)*

System 03A Reid Gardner Unit #3 Steam Boiler, Coal Fired.

S2.003 Steam Boiler, Foster Wheeler, Model # 279-1554, Serial # 08-1544, Manufactured July 1976. 1,237 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Air Pollution Equipment

Emissions from **S2.003** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 28,000,000 standard cubic feet per hour (SCFH):

- a. Mechanical fly ash collectors for the control of particulate matter.
- b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
- c. Low NO_x coal burners and over-fired air.

The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits

- a. On and after the date of startup of **S2.003**, *the Permittee* will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.003**, the following pollutants in excess of the following specified limits:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
 - (3) 40 CFR Part 60.42(a)(1) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu).
 - (4) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 737.25 pounds per hour.
 - (5) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 737.25 pounds per hour.
 - (6) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number Three of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
 - (7) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).



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Section VI. Specific Operating Conditions (continued)

E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

- (8) 40 CFR Part 60.43(a)(2) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 520 nonograms per joule heat input (1.2 lb per million Btu).
- (9) 40 CFR Part 60.44(a)(3) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO₂ in excess of 300 nanograms per joule heat input (0.70 lb per million Btu).
- (10) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.003** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- (11) NAC 445B.22017 State-Only Requirement - The opacity from **S2.003** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). **S2.003** is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42(a)(2).
- (12) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.003** may exceed the level set in E.2.a.(11) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.
- (13) 40 CFR Part 60.42(a)(2) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

- (1) *The Permittee* will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.003 SO₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.003 NO_x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

- (2) *The Permittee* will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].



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Section VI. Specific Operating Conditions (continued)

E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Operating Parameters

- a. **S2.003** will combust sub-bituminous and/or bituminous coal only when operating under this operating scenario.
- b. **S2.003** may operate a total of 8,760 hours per calendar year.
- c. The maximum operating heat input rate for **S2.003** while combusting sub-bituminous and/or bituminous coal will not exceed 1,237 million Btu per any one-hour period.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

Within 180 days of the date of issuance of this operating permit, and once annually thereafter, **The Permittee** will:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.003** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160+/- 14°C (320+/- 25°F). The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O₂ concentration for the run shall be the arithmetic mean of the sample O₂ concentrations at all traverse points. If the particulate run has more than 12 traverse points, the O₂ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O₂ traverse points (40 CFR Part 60.46(b)(2)).
- (2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.003** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by the Method 5 performance test required in E.4.a.(1) above. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
- (3) Conduct and record a Method 6 performance test for SO₂ on the exhaust stack of **S2.003** consisting of three valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*). The sampling site shall be the same as that selected for the particulate sample required in E.4.a.(1). The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval. The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the SO₂ sample. The SO₂ emission rate shall be computed for each pair of SO₂ and O₂ samples. The SO₂ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples (40 CFR Part 60.46(b)(4)).
- (4) Conduct and record a Method 7 performance test for NO_x on the exhaust stack of **S2.003** consisting of three valid runs. The Method 7 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7. The sampling site and location shall be the same as for the SO₂ sample required in E.4.a.(3). Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals. For each NO_x sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the NO_x sample. The NO_x emission rate shall be computed for each pair of NO_x and O₂ samples. The NO_x emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples (40 CFR Part 60.46(b)(5)).



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Section VI. Specific Operating Conditions (continued)

E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (5) During one of the three test runs required in E.4.a.(1) of this section, conduct and record a Method 9 visual opacity observation of the discharge from the exhaust stack of **S2.003**. The Method 9 opacity test must be conducted in accordance with the visible emissions evaluation procedures contained in 40 CFR Part 60, Appendix A, Method 9. A certified visible emissions reader must conduct the visible emissions evaluations for a period of at least 6 minutes. The opacity readings must be averaged such that compliance with both a 6-minute average and 2, 3-minute averages are determined (40 CFR Part 60.46(b)(3)).
- (6) The performance tests will be conducted at the maximum operating heat input rate limit established in E.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. **The Permittee** shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (7) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternatives to the reference methods and procedures provided in 40 CFR Part 60.46(d) may be utilized to the extent that they are applicable to **S2.003**, and must be identified in the testing procedures as alternative methods.
- (8) During each performance test required in E.4.a.(1) through (4) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 and Method 7 performance tests for SO₂ and NO_x must be converted to emissions of sulfur (both lb/hr and lb/MMBtu) and emissions of nitrogen oxides (lb/MMbtu). The emissions results of the Method 5 performance test for PM and Method 5 or Method 201A and 202 performance tests for PM₁₀ must be reported in lb/MMBtu. The emission rate (E) of particulate matter, SO₂, and NO_x shall be computed for each run using the following formula (40 CFR Part 60.46(b)(1):
 - (i). $E = C F_d (20.9)/(20.9 - \% O_2)$
E = emission rate of pollutant , ng/J (lb/million Btu)
C = concentration of pollutant, ng/dscm (lb/dscf)
% O₂ = oxygen concentration, percent dry basis
F_d = factor as determined from Method 19.
- (9) As a result of the most recent performance test performed in E.4.a.(1) through (4) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.



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E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Compliance, Monitoring, Recordkeeping and Reporting (continued)

- (10) Within 60 days after completing the performance tests and opacity observations contained in E.4.a. of this section, *the Permittee* shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.003**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.003**.
- (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device required in E.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
- (3) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (4) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (5) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.003**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.003** to accurately and continuously measure the SO₂ concentration in **S2.003** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), Method 6 and 3B shall be used for the performance evaluations of sulfur dioxide (40 CFR Part 60.45(c)(1)). Sulfur dioxide shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B of 40 CFR Part 60 (40 CFR Part 60.45(c)(2)). The span value for the CEMS shall be determined in accordance with the provisions contained in 40 CFR Part 60.45(c)(3) & (4).



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E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)
 - b. **Monitoring (continued)**
 - (6) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in E.4.b.(5) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specifications, 40 CFR Part 75, Part 75.11 and Appendix F.
 - (7) Install, calibrate, operate and maintain a NO_x continuous emissions monitor system (CEMS) (consisting of a NO_x pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of NO_x (in ppm), volumetric gas flow (in scfh), and NO_x mass emissions (in lb/MMBtu) from **S2.003**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.003** to accurately and continuously measure the NO_x concentration in **S2.003** in accordance with the requirements prescribed in 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), Method 7 and 3B shall be used for the performance evaluations of nitrogen oxides (40 CFR Part 60.45(c)(1)). Nitric oxide shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B of 40 CFR Part 60 (40 CFR Part 60.45(c)(2)). The span value for the CEMS shall be determined in accordance with the provisions contained in 40 CFR Part 60.45(c)(3) & (4).
 - (8) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the NO_x concentration (in ppm), volumetric gas flow (in scfh), and NO_x mass emissions (in lb/MMBtu), as measured by the CEMS required in E.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F.
 - (9) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.003**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.003** to accurately and continuously measure the opacity of **S2.003** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 1, and 40 CFR Part 75.10. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), the span value for the continuous opacity monitoring system shall be 80, 90, or 100 percent (40 CFR Part 60.45(c) and 60.45(c)(3)).
 - (10) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in E.4.b.(9) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 1, 40 CFR Part 75.10 and 40 CFR Part 75.14.



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Section VI. Specific Operating Conditions (continued)

E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

c. **Recordkeeping**

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.003** is operating under this operating scenario:

- (1) The total hourly quantity of sub-bituminous and/or bituminous coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in E.4.b.(2) of this section.
- (2) The total daily hours of operation for the corresponding date.
- (3) The heat content of the sub-bituminous and/or bituminous coal combusted for the corresponding date, in Btu per ton (Btu/ton). The heat content of the sub-bituminous and/or bituminous coal will be based on the gross calorific value determined in E.4.b.(4) of this section.
- (4) The hourly heat input of the sub-bituminous and/or bituminous coal combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in E.4.c.(2) of this section, and the heat content of the fuel as recorded in E.4.c.(3) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

- (5) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the heat content of the fuel determined in E.4.b.(4) of this section, and the emission factor derived in E.4.a.(9) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lb/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

- (6) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in E.4.b.(6) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (7) The hourly emissions rate of NO_x in pounds per million Btu (lbs/MMBtu) for each 1-hour period measured by the CEMS required in E.4.b.(8) of this section. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour rolling average).
- (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in E.4.b.(10) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
 - (i). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).
 - (ii). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42(a)(2).



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Section VI. Specific Operating Conditions (continued)

E. Emission Unit #S2.003 - Primary Operating Scenario: 100% Coal Fired (continued)

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in E.4.a.(10) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in E.2.a.(7) of this section.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

F. *Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil.*

UTM: North 4059.35 km, East 711.68 km (Zone 11)

System 03B Reid Gardner Unit No. 3 Steam Boiler, Coal Firing and No. 2 Distillate Fuel Oil.

S2.003 Steam Boiler, Foster Wheeler, Model # 279-1554, Serial # 08-1544, Manufactured July 1976. 1,237 million Btu/hr, Maximum Heat Input, Nominal 110.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Air Pollution Equipment

Emissions from **S2.003** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 28,000,000 standard cubic feet per hour (SCFH):

- a. Mechanical fly ash collectors for the control of particulate matter.
- b. Soda ash wet scrubber (Flue Gas Desulfurization – FGD) for the control of sulfur dioxide and particulate matter.
- c. Low NO_x coal burners and over-fired air.

The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits

a. On and after the date of startup of **S2.003**, *the Permittee* will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.003**, the following pollutants in excess of the following specified limits while operating under this alternative operating scenario:

- (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.20 pound per million Btu.
- (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.20 pound per million Btu.
- (3) 40 CFR Part 60.42(a)(1) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu).
- (4) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
- (5) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 724.14 pounds per hour.
- (6) NAC 445B.22057 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number Three of the Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pound per million Btu.
- (7) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.55 pound per million Btu (based on a 3-hour rolling average period).



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Section VI. Specific Operating Conditions (continued)

F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

- (8) 40 CFR Part 60.43(a)(2) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 520 nanograms per joule heat input (1.2 lb per million Btu). When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula (40 CFR Part 60.43(b)):

(i). $PS_{SO_2} = [y(340) + z(520)]/(y + z)$

Where:

PS_{SO_2} is the prorated standard for sulfur dioxide when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

y is the percentage of total heat input derived from liquid fossil fuel, and

z is the percentage of total heat input derived from solid fossil fuel.

Compliance shall be based on the total heat input from all fossil fuels burned (40 CFR Part 60.43(c)).

- (9) 40 CFR Part 60.44(a)(3) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO_2 in excess of 300 nanograms per joule heat input (0.70 lb per million Btu). When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula (40 CFR Part 60.44(b)):

(i). $PS_{NO_x} = w(260) + x(86) + y(130) + z(300)/(w + x + y + z)$

Where:

PS_{NO_x} is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w is the percentage of total heat input derived from lignite;

x is the percentage of total heat input derived from gaseous fossil fuel;

y is the percentage of total heat input derived from liquid fossil fuel; and

z is the percentage of total heat input derived from solid fossil fuel (except lignite).

- (10) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.003** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.

- (11) NAC 445B.22017 State-Only Requirement - The opacity from **S2.003** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). **S2.003** is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42(a)(2).

- (12) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.003** may exceed the level set in F.2.a.(11) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.



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Section VI. Specific Operating Conditions (continued)

F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

(13)40 CFR Part 60.42(a)(2) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

(1) **The Permittee** will not exceed the SO₂ and NO_x emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.002 SO₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.002 NO_x Emission Limit (lb/MMBtu)	0.46	0.46	0.46	0.46	0.46

(2) **The Permittee** will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. While operating under this alternative operating scenario, **S2.003** may co-fire sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil for purposes of startup, shutdown and/or flame stabilization only.
- b. **S2.003** may operate a total of 8,760 hours per calendar year.
- c. The maximum operating heat input rate for **S2.003** while co-firing sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil will not exceed 1,237 million Btu per any one-hour period.



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Section VI. Specific Operating Conditions (continued)

F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

For each calendar year *The Permittee* operates **S2.003** more than 500 hours under this alternative operating scenario, *The Permittee* will perform the following testing no later than 60 days after reaching the 500 hours of operation:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.003** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160+/- 14°C (320+/- 25°F). The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O₂ concentration for the run shall be the arithmetic mean of the sample O₂ concentrations at all traverse points. If the particulate run has more than 12 traverse points, the O₂ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O₂ traverse points (40 CFR Part 60.46(b)(2)).
- (2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.001** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by the Method 5 performance test required in F.4.a.(1) above. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
- (3) Conduct and record a Method 6 performance test for SO₂ on the exhaust stack of **S2.003** consisting of three valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 (*PSD permit requirement VIII.B.2. issued January 3, 1980*). The sampling site shall be the same as that selected for the particulate sample required in E.4.a.(1). The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval. The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the SO₂ sample. The SO₂ emission rate shall be computed for each pair of SO₂ and O₂ samples. The SO₂ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples (40 CFR Part 60.46(b)(4)).
- (4) Conduct and record a Method 7 performance test for NO_x on the exhaust stack of **S2.003** consisting of three valid runs. The Method 7 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7. The sampling site and location shall be the same as for the SO₂ sample required in E.4.a.(3). Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals. For each NO_x sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O₂ concentration (%O₂). The O₂ sample shall be taken simultaneously with, and at the same point as, the NO_x sample. The NO_x emission rate shall be computed for each pair of NO_x and O₂ samples. The NO_x emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples (40 CFR Part 60.46(b)(5)).



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F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. **Compliance/Performance Testing (continued)**

- (5) During one of the three test runs required in F.4.a.(1) of this section, conduct and record a Method 9 visual opacity observation of the discharge from the exhaust stack of **S2.003**. The Method 9 opacity test must be conducted in accordance with the visible emissions evaluation procedures contained in 40 CFR Part 60, Appendix A, Method 9. A certified visible emissions reader must conduct the visible emissions evaluations for a period of at least 6 minutes. The opacity readings must be averaged such that compliance with both a 6-minute average and 2, 3-minute averages are determined (40 CFR Part 60.46(b)(3)).
- (6) The performance tests will be conducted at the maximum operating heat input rate limit established in F.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. **The Permittee** shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.
- (7) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternative to the reference methods and procedures provided in 40 CFR Part 60.46(d) may be utilized to the extent that they are applicable to **S2.003**, and must be identified in the testing procedures as alternative methods.
- (8) During each performance test required in F.4.a.(1) through (4) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 and Method 7 performance tests for SO₂ and NO_x must be converted to emissions of sulfur (both lb/hr and lb/MMBtu) and emissions of nitrogen oxides (lb/MMbtu). The emissions results of the Method 5 performance test for PM and Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu. The emission rate (E) of particulate matter, SO₂, and NO_x shall be computed for each run using the following formula (40 CFR Part 60.46(b)(1)):
 - (i). $E = C F_d (20.9)/(20.9 - \% O_2)$
E = emission rate of pollutant, ng/J (lb/million Btu)
C = concentration of pollutant, ng/dscm (lb/dscf)
% O₂ = oxygen concentration, percent dry basis
F_d = factor as determined from Method 19.
- (9) As a result of the most recent performance test performed in F.4.a.(1) through (4) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.



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F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Compliance, Monitoring, Recordkeeping and Reporting (continued)

- (10) Within 60 days after completing the performance tests and opacity observations contained in F.4.a. of this section, **the Permittee** shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.003**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.003**.
- (2) Install, calibrate, operate and maintain a fuel flow meter to continuously record the mass amount (in pounds-mass) of No. 2 distillate fuel oil combusted in **S2.003**. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.003** in accordance with the requirements prescribed in 40 CFR Part 75.
- (3) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device and the mass amount (in pounds-mass) of the No. 2 distillate fuel oil as measured by the fuel flow meter required in F.4.b.(1) & (2) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 75.
- (4) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (5) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (6) Using either the Flow Proportional or Daily Method described in 40 CFR Part 75, Appendix D 2.2.2, 2.2.3, or 2.2.4 prepare a daily sample representative of the No. 2 distillate fuel oil combusted in **S2.003** for each day of operation while combusting that fuel. The sulfur content of the daily fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D. The fuel oil gross calorific value of this daily sample will be determined in accordance with ASTM D240-87 (Re-approved 1991), "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter" or ASTM D2382-88, "Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method) and the requirements prescribed in 40 CFR Part 75, Appendix F, Section 3.3.6.2." Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.



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F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring (continued)**

- (7) Substitute any missing fuel flow meter data in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.2. Substitute any missing sulfur content data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1. Substitute any missing gross calorific value data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1.
- (8) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of SO₂ (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.003**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.003** to accurately and continuously measure the SO₂ concentration in **S2.003** in accordance with the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), Method 6 and 3B shall be used for the performance evaluations of sulfur dioxide (40 CFR Part 60.45(c)(1)). Sulfur dioxide shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B of 40 CFR Part 60 (40 CFR Part 60.45(c)(2)). The span value for the CEMS shall be determined in accordance with the provisions contained in 40 CFR Part 60.45(c)(3) & (4).
- (9) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in F.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specifications, 40 CFR Part 75, Part 75.11 and Appendix F.
- (10) Install, calibrate, operate and maintain a NO_x continuous emissions monitor system (CEMS) (consisting of a NO_x pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of NO_x (in ppm), volumetric gas flow (in scfh), and NO_x mass emissions (in lb/MMBtu) from **S2.003**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.003** to accurately and continuously measure the NO_x concentration in **S2.003** in accordance with the requirements prescribed in 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), Method 7 and 3B shall be used for the performance evaluations of nitrogen oxides (40 CFR Part 60.45(c)(1)). Nitric oxide shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B of 40 CFR Part 60 (40 CFR Part 60.45(c)(2)). The span value for the CEMS shall be determined in accordance with the provisions contained in 40 CFR Part 60.45(c)(3) & (4).
- (11) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the NO_x concentration (in ppm), volumetric gas flow (in scfh), and NO_x mass emissions (in lb/MMBtu), as measured by the CEMS required in F.4.b.(10) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F.



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Section VI. Specific Operating Conditions (continued)

F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

- 4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. **Monitoring (continued)**

- (12) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.003**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.003** to accurately and continuously measure the opacity of **S2.003** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 1, and 40 CFR Part 75.10. For performance evaluations under 40 CFR Part 60.13(c) and calibration checks under 60.13(d), the span value for the continuous opacity monitoring system shall be 80, 90, or 100 percent (40 CFR Part 60.45(c) and 60.45(c)(3)).
- (13) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in F.4.b.(12) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.45(a), 40 CFR Part 60, Appendix B, Performance Specification 1, 40 CFR Part 75.10 and 40 CFR Part 75.14.

c. **Recordkeeping**

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.003** is operating under this operating scenario:

- (1) The name of the operating scenario, the type(s) of fuel(s) combusted and the calendar date of any required monitoring, including the date and time of switching from one operating scenario to another.
- (2) The total hourly quantity of co-fired sub-bituminous and/or bituminous coal (in tons) and the mass amount of No. 2 distillate fuel oil in pounds-mass (lbm) combusted, for each hour of operation based on the data recorded by the CDCS as required in F.4.b.(3) of this section.
- (3) The total daily hours of operation for the corresponding date.
- (4) The heat content of each fuel combusted for the corresponding date, in Btu/ton (coal) and Btu/pound (No. 2 distillate fuel oil). The heat content for each fuel will be based on the gross calorific value determined in F.4.b.(5) & (6) of this section.
- (5) The hourly heat input of the co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in F.4.c.(2) of this section, and the heat content of the fuel as recorded in F.4.c.(4) of this section.

Sample Calculation:

$$\begin{aligned} (\text{tons-coal/hr})(\text{Btu/ton-coal}) &= \text{Btu/hr or MMBtu/hr} \\ (\text{lbm-No. 2 Distillate/hr})(\text{Btu/lbs}) &= \text{Btu/hr or MMBtu/hr - No. 2 Distillate} \end{aligned}$$

Sum:

$$\text{MMBtu/hr - Coal} + \text{MMBtu/hr - No. 2 Distillate} = \text{Hourly Heat Input in MMBtu/hr}$$

- (6) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the hourly quantity of co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil determined in F.4.b.(3) of this section, and the emission factor derived in F.4.a.(9) of this section.

Sample Calculation:

$$\begin{aligned} (\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) &= \text{lbs-PM/Btu or lbs-PM/MMBtu} \\ (\text{lbm-No. 2 Distillate/Btu})(\text{lbs-PM/lbm-No. 2 Distillate}) &= \text{lbs-PM/Btu or lbs-PM/MMBtu - No. 2 Distillate} \end{aligned}$$

Sum:

$$\text{lbs-PM/MMBtu - Coal} + \text{lbs-PM/MMBtu - No. 2 Distillate} = \text{Hourly Emission Rate in lbs-PM/MMBtu}$$



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F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Compliance, Monitoring, Recordkeeping and Reporting (continued)

c. **Recordkeeping (continued)**

- (7) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in F.4.b.(8) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) for each 1-hour period. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour average period). Sulfur emissions will be one-half of the SO₂ emissions measured.
- (8) The hourly emissions rate of NO_x in pounds per million Btu (lbs/MMBtu) for each 1-hour period measured by the CEMS required in F.4.b.(10) of this section. The conversion procedures established in 40 CFR Part 60.45(e) & (f) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 3-hour rolling average).
- (9) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in F.4.b.(12) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
 - (i). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).
 - (ii). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42(a)(2).

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in F.4.a.(10) of this section.
- (6) *Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80)* - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Excess emissions shall be defined as any three-hour period during which the average emissions of sulfur dioxide, as measured by the continuous monitoring system, exceeds the sulfur dioxide maximum limit in F.2.a.(7) of this section.



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F. Emission Unit #S2.003 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

d. **Reporting (continued)**

(vi). **The Permittee** shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

(7) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

G. *Emission Unit #S2.004. Primary Operating Scenario: 100% Coal Fired. UTM: North 4059.28 km, East 711.68 km (Zone 11)*

System 04A Reid Gardner Unit #4 Steam Boiler, Coal Fired.

S2.004 Steam Boiler, Foster Wheeler, Model # Custom Built, Serial # 12A6361-1, Unit Manufactured July 1983. 2,956 million Btu/hr, Maximum Heat Input, Nominal 295.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Air Pollution Equipment
Emissions from **S2.004** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 60,000,000 standard cubic feet per hour (SCFH):
 - a. Twin parallel baghouse filtration systems for the control of particulate matter Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80).
 - b. Sodium carbonate wet spray scrubbing system for the control of sulfur dioxide Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80).
 - c. Low NOx coal burners and over-fired air.
The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.
2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits
 - a. On and after the date of startup of **S2.004**, the **Permittee** will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.004**, the following pollutants in excess of the following specified limits:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.16 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.16 pound per million Btu.
 - (3) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.03 pound per million Btu.
 - (4) 40 CFR Part 60.42a(a) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 13 nanograms per joule (0.03 lb per million Btu) heat input derived from the combustion of solid fuel and 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel.
 - (5) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 1,773.6 pounds per hour.
 - (6) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 1,773.6 pounds per hour.



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Section VI. Specific Operating Conditions (continued)

G. *Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)*

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

- (7) NAC 445B.2206 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number Four of Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.145 pound per million Btu. The efficiency of the capture of sulfur must be maintained at a minimum of 85 percent, based on a 30-day rolling average.
- (8) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.29 pound per million Btu (based on a 30-day rolling average period).
- (9) 40 CFR Part 60.43a(a) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the initial performance test required to be conducted under Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts solid fuel, any gases which contain sulfur dioxide in excess of 520 nonograms per joule (1.20 lb per million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction), or 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 nonograms per joule (0.60 lb per million Btu) heat input. Compliance with the emission limitation and percent reduction requirements under this section are both determined on a 30-day rolling average basis (40 CFR Part 60.43a(g)).
- (10) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of NO₂ to the atmosphere will not exceed 0.5 pound per million Btu while firing sub-bituminous coal.
- (11) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of NO₂ to the atmosphere will not exceed 0.6 pound per million Btu while firing bituminous coal.
- (12) 40 CFR Part 60.44a(a) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the initial performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides (expressed as NO₂) in excess of the following emission limits, based on a 30-day rolling average:
- (i). Solid fuels:
 - Sub-bituminous Coal 210 ng/J (0.50 lb/million Btu)
 - Bituminous Coal 260 ng/J (0.60 lb/million Btu)
 - (ii). NO_x reduction requirement
 - Solid fuels 65 percent reduction of potential combustion concentration
- (13) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.004** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- (14) NAC 445B.22017 State-Only Requirement - The opacity from **S2.004** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). **S2.004** is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42a(2).



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Section VI. Specific Operating Conditions (continued)

G. *Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)*

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

(15) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.004** may exceed the level set in G.2.a.(14) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.

(16) 40 CFR Part 60.42a(b) Federally Enforceable New Source Performance Standard Requirement - On and after the date the particulate matter performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

(17) *The Permittee* will not exceed the SO₂ emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.004 SO₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.004 NO_x Emission Limit (lb/MMBtu)	0.50	0.50	0.50	0.50	0.50

The Permittee will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- S2.004** will combust sub-bituminous and/or bituminous coal only when operating under this operating scenario.
- S2.004** may operate a total of 8,760 hours per calendar year.
- The maximum operating heat input rate for **S2.004** while combusting sub-bituminous and/or bituminous coal will not exceed 2,956 million Btu per any one-hour period.



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Section VI. Specific Operating Conditions (continued)

G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

Within 180 days of the date of issuance of this operating permit, and once annually thereafter, *The Permittee* will:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.004** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. Compliance with the particulate matter standards contained in G.2.a.(2) through (4) shall be determined by using the dry basis F factor (O₂) procedures in Method 19 to compute the emissions rate. Method 5B shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 120 minutes and 1.70 dscm (60 dscf). The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of 160+/- 14^oC (320+/- 25^oF). For each particulate run, the emission rate correction factor, integrated or grab sampling and analysis procedures of Method 3B shall be used to determine the O₂ concentration. The O₂ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the O₂ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O₂ traverse points (40 CFR Part 60.48a(b)).
- (2) Conduct and record a Method 201A and 202 performance test for PM₁₀ on the exhaust stack of **S2.004** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by the Method 5 performance test required in G.4.a.(1) above. All particulate captured in the Method 5 test will be considered PM₁₀ for compliance demonstration purposes.
- (3) Conduct and record a Method 6 performance test for SO₂ on the exhaust stack of **S2.004** consisting of three valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6.
- (4) Conduct and record a Method 7 performance test for NO_x on the exhaust stack of **S2.004** consisting of three valid runs. The Method 7 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7.
- (5) During one of the three test runs required in G.4.a.(1) of this section, conduct and record a Method 9 visual opacity observation of the discharge from the exhaust stack of **S2.004**. The Method 9 opacity test must be conducted in accordance with the visible emissions evaluation procedures contained in 40 CFR Part 60, Appendix A, Method 9. A certified visible emissions reader must conduct the visible emissions evaluations for a period of at least 6 minutes. The opacity readings must be averaged such that compliance with both a 6-minute average and 2, 3-minute averages are determined (40 CFR Part 60.48a(b)(3)).
- (6) The performance tests will be conducted at the maximum operating heat input rate limit established in G.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. *The Permittee* shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.



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Section VI. Specific Operating Conditions (continued)

G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Compliance, Monitoring, Recordkeeping and Reporting (continued)

- (7) **The Permittee** shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternative to the reference methods and procedures provided in 40 CFR Part 60.48a(e) may be utilized to the extent that they are applicable to **S2.004**, and must be identified in the testing procedures as alternative methods.
- (8) During each performance test required in G.4.a.(1) through (4) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 and Method 7 performance tests for SO₂ and NO_x must be converted to emissions of sulfur (both lb/hr and lb/MMBtu) and emissions of nitrogen oxides (lb/MMbtu). The emissions results of the Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (9) As a result of the most recent performance test performed in G.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.

- (10) Within 60 days after completing the performance tests and opacity observations contained in G.4.a. of this section, **the Permittee** shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. Monitoring

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.004**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.004**.
- (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device required in G.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
- (3) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (4) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (5) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration and percent reduction of SO₂ (in ppm), percent reduction, volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.004**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.004** to accurately and continuously measure the SO₂ concentration in **S2.004** in accordance with the requirements prescribed in 40 CFR Part 60.47a(b), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. SO₂ emissions are monitored at both the inlet and outlet of the sulfur dioxide control device. The procedures established in 40 CFR Part 60.47a(i) shall be used to conduct monitoring system performance evaluations.
- (6) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), SO₂ percent reduction, volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in G.4.b.(5) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.47a, 40 CFR Part 60, Appendix B, Performance Specifications, 40 CFR Part 75, Part 75.11 and Appendix F.



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Section VI. Specific Operating Conditions (continued)

G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)
 - (7) Install, calibrate, operate and maintain a NO_x continuous emissions monitor system (CEMS) (consisting of a NO_x pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of NO_x (in ppm), volumetric gas flow (in scfh), and NO_x emissions rate (in lb/MMBtu) from **S2.004**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.004** to accurately and continuously measure the NO_x concentration in **S2.004** in accordance with the requirements prescribed in 40 CFR Part 60.47a(c), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. The NO_x CEMS installed to meet the requirements of 40 CFR Part 75 may be used to meet the requirements of 40 CFR Part 60.47(c). The requirements established in 60.49a continue to apply, except that the permittee shall also meet the requirements of 40 CFR Part 60.49a shall not include data substituted using the missing data procedures in subpart D of 40 CFR Part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75. The procedures established in 40 CFR Part 60.47a(i) shall be used to conduct monitoring system performance evaluations.
 - (8) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the NO_x concentration (in ppm), volumetric gas flow (in scfh), and NO_x emissions rate (in lb/MMBtu), as measured by the CEMS required in G.4.b.(7) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F.
 - (9) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored (40 CFR Part 60.47a(d)).
 - (10) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.004**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.004** to accurately and continuously measure the opacity of **S2.004** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.47a(a), 40 CFR Part 60, Appendix B, Performance Specification 1, and 40 CFR Part 75.10. If opacity interference due to water droplets exists in the stack, the opacity is monitored upstream of the interference.
 - (11) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in G.4.b.(10) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.47a(a), 40 CFR Part 60, Appendix B, Performance Specification 1, 40 CFR Part 75.10 and 40 CFR Part 75.14.



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Section VI. Specific Operating Conditions (continued)

G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

c. Recordkeeping

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.004** is operating under this operating scenario:

- (1) The total hourly quantity of sub-bituminous and/or bituminous coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in G.4.b.(2) of this section.
- (2) The total daily hours of operation for the corresponding date.
- (3) The heat content of the sub-bituminous and/or bituminous coal combusted for the corresponding date, in Btu per ton (Btu/ton). The heat content of the sub-bituminous and/or bituminous coal will be based on the gross calorific value determined in G.4.b.(4) of this section.
- (4) The hourly heat input of the sub-bituminous and/or bituminous coal combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in G.4.c.(2) of this section, and the heat content of the fuel as recorded in G.4.c.(3) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

- (5) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the heat content of the fuel determined in G.4.b.(4) of this section, and the emission factor derived in G.4.a.(9) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lb/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

- (6) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in G.4.b.(6) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The Sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) and the percent reduction levels for each 30-day rolling average period. The compliance determination procedures established in 40 CFR Part 60.48a(c) will be used to convert the continuous monitoring data into units of the applicable standards (lb/MMBtu, 30-day rolling average period and percent reduction).
- (7) The hourly emissions rate of NO_x in pounds per million Btu (lbs/MMBtu) and the percent reduction levels for each 30-day rolling average period measured by the CEMS required in G.4.b.(7) of this section. The compliance determination procedures established in 40 CFR Part 60.48a(d) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 30-day rolling average period and percent reduction).



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Section VI. Specific Operating Conditions (continued)

G. Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)

c. **Recordkeeping (continued)**

- (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in G.4.b.(10) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
- (i). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).
 - (ii). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42a(b).

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in G.4.a.(10) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Reid Gardner Unit #4 is subject to the federal regulations entitled "Standards of Performance for New Stationary Sources" (40 CFR Part 60). Nevada Power Company shall comply with all requirements of Subpart Da of this regulation.
 - (vi). *The Permittee* shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable New Source Performance Standard Requirement - Submit reports in accordance with the provisions established in 40 CFR Part 60.49a.



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Section VI. Specific Operating Conditions (continued)

G. *Emission Unit #S2.004 - Primary Operating Scenario: 100% Coal Fired (continued)*

d. Reporting (continued)

(8) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirements apply only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions

H. Emission Unit #S2.004. Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil.

UTM: North 4059.28 km, East 711.68 km (Zone 11)

System 04B Reid Gardner Unit #4 Steam Boiler, Coal Firing and No. 2 Distillate Fuel Oil.

S2.004 Steam Boiler, Foster Wheeler, Model # Custom Built, Serial # 12A6361-1, Unit Manufactured July 1983. 2,956 million Btu/hr, Maximum Heat Input, Nominal 295.0 MW Output.

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Air Pollution Equipment

Emissions from **S2.004** shall be ducted to the following emissions control system with 100% capture and a maximum volume flow rate of 60,000,000 standard cubic feet per hour (SCFH):

- a. Twin parallel baghouse filtration systems for the control of particulate matter Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80).
- b. Sodium carbonate wet spray scrubbing system for the control of sulfur dioxide Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80).
- c. Low NO_x coal burners and over-fired air.

The volumetric flow rate may be determined by utilizing Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate as referenced in 40 CFR Part 60, Appendix A.

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits

- a. On and after the date of startup of **S2.004**, the **Permittee** will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.004**, the following pollutants in excess of the following specified limits:
 - (1) NAC 445B.2203 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.16 pound per million Btu.
 - (2) SIP 445.731 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.16 pound per million Btu.
 - (3) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of PM (particulate matter) to the atmosphere will not exceed 0.03 pound per million Btu.
 - (4) 40 CFR Part 60.42a(a) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 13 nanograms per joule (0.03 lb per million Btu) heat input derived from the combustion of solid or liquid fuel and 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel and 30 percent of the potential combustion concentration (70 percent reduction) when combusting liquid fuel.
 - (5) NAC 445B.22047 State-Only Requirement - The discharge of sulfur to the atmosphere will not exceed 1,761.8 pounds per hour.
 - (6) Article 8.2.1.2 Federally Enforceable SIP - The discharge of sulfur to the atmosphere will not exceed 1,761.8 pounds per hour.



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

- (7) NAC 445B.2206 State-Only Requirement - The allowable emission of sulfur from fossil-fired power generating Unit Number Four of Nevada Power Company's Reid Gardner Station, located in air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.145 pound per million Btu. The efficiency of the capture of sulfur must be maintained at a minimum of 85 percent, based on a 30-day rolling average.
- (8) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of SO₂ to the atmosphere will not exceed 0.29 pound per million Btu (based on a 30-day rolling average period).
- (9) 40 CFR Part 60.43a(h) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the initial performance test required to be conducted under Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts a combination of fuels, any gases which contain sulfur dioxide in excess of the applicable standard determined by proration using the formulas contained in 40 CFR Part 60.43a(h)(2). Compliance with the emission limitation and percent reduction requirements under this section are both determined on a 30-day rolling average basis, 40 CFR Part 60.43a(g).
- (10) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of NO₂ to the atmosphere will not exceed 0.5 pound per million Btu while firing sub-bituminous coal.
- (11) NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The discharge of NO₂ to the atmosphere will not exceed 0.6 pound per million Btu while firing bituminous coal.
- (12) 40 CFR Part 60.44a(c) Federally Enforceable New Source Performance Standard Requirement - On and after the date on which the initial performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts a combination of fuels, any gases which contain nitrogen oxides (expressed as NO₂) in excess of the applicable standard determined by proration using the formulas contained in 40 CFR Part 60.44a(c).
- (13) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.004** will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- (14) NAC 445B.22017 State-Only Requirement - The opacity from **S2.004** will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). **S2.004** is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42a(2).
- (15) NAC 445B.2202.6 State-Only Requirement - The opacity from **S2.004** may exceed the level set in H.2.a.(14) of this section for the purposes of boiler lancing or soot blowing, not to exceed 180 minutes in any consecutive 24 hour period.
- (16) 40 CFR Part 60.42a(b) Federally Enforceable New Source Performance Standard Requirement - On and after the date the particulate matter performance test required to be conducted by Sec. 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Emission Limits (continued)

b. Specific Acid Rain Requirements Parts 72 - 78 Acid Rain Program

The Permittee will not exceed the SO₂ emission levels (acid rain allowances) for the indicated years as shown in the following table without holding the required acid rain allowances in accordance with Section IV.B.2 of the Acid Rain provisions and pursuant to 40 CFR 72.9:

Calendar Year	2001	2002	2003	2004	2005
S2.004 SO ₂ Phase II Allowance	2,172	2,172	2,172	2,172	2,172
S2.004 NO _x Emission Limit (lb/MMBtu)	0.50	0.50	0.50	0.50	0.50

The Permittee will comply with the “Standard Requirements” provisions of the SO₂ acid rain permit application dated January 26, 1995 entitled “Phase II Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating document (Attachment 1). [NAC 445B.305].

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Operating Parameters

- a. While operating under this alternative operating scenario, **S2.004** may co-fire sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil for purposes of startup, shutdown and/or flame stabilization only.
- b. **S2.004** may operate a total of 8,760 hours per calendar year.
- c. The maximum operating heat input rate for **S2.004** while combusting sub-bituminous and/or bituminous coal will not exceed 2,956 million Btu per any one-hour period.



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing**

For each calendar year *The Permittee* operates **S2.004** more than 500 hours under this alternative operating scenario, *The Permittee* will perform the following testing no later than 60 days after reaching the 500 hours of operation:

- (1) Conduct and record a Method 5 performance test for PM on the exhaust stack of **S2.004** consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. Compliance with the particulate matter standards contained in H.2.a.(2) through (4) shall be determined by using the dry basis F factor (O_2) procedures in Method 19 to compute the emissions rate. Method 5B shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 120 minutes and 1.70 dscm (60 dscf). The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of $160 \pm 14^\circ C$ ($320 \pm 25^\circ F$). For each particulate run, the emission rate correction factor, integrated or grab sampling and analysis procedures of Method 3B shall be used to determine the O_2 concentration. The O_2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the O_2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O_2 traverse points (40 CFR Part 60.48a(b)).
- (2) Conduct and record a Method 201A and 202 performance test for PM_{10} on the exhaust stack of **S2.004** consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The Method 201A and 202 emissions tests may be replaced by the Method 5 performance test required in H.4.a.(1) above. All particulate captured in the Method 5 test will be considered PM_{10} for compliance demonstration purposes.
- (3) Conduct and record a Method 6 performance test for SO_2 on the exhaust stack of **S2.004** consisting of three valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6.
- (4) Conduct and record a Method 7 performance test for NO_x on the exhaust stack of **S2.004** consisting of three valid runs. The Method 7 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7.
- (5) During one of the three test runs required in H.4.a.(1) of this section, conduct and record a Method 9 visual opacity observation of the discharge from the exhaust stack of **S2.004**. The Method 9 opacity test must be conducted in accordance with the visible emissions evaluation procedures contained in 40 CFR Part 60, Appendix A, Method 9. A certified visible emissions reader must conduct the visible emissions evaluations for a period of at least 6 minutes. The opacity readings must be averaged such that compliance with both a 6-minute average and 2, 3-minute averages are determined (40 CFR Part 60.48a(b)(3)).
- (6) The performance tests will be conducted at the maximum operating heat input rate limit established in H.3.c of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.3 & 4. *The Permittee* shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3). Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing will be performed prior to the overhaul(s). If the performance testing can not be performed prior to a major boiler overhaul, the testing will be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul.



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H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

a. **Compliance/Performance Testing (continued)**

- (7) *The Permittee* shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternative to the reference methods and procedures provided in 40 CFR Part 60.48a(e) may be utilized to the extent that they are applicable to **S2.004**, and must be identified in the testing procedures as alternative methods.
- (8) During each performance test required in H.4.a.(1) through (4) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 6 and Method 7 performance tests for SO₂ and NO_x must be converted to emissions of sulfur (both lb/hr and lb/MMBtu) and emissions of nitrogen oxides (lb/MMbtu). The emissions results of the Method 5 or Method 201A and 202 performance test for PM₁₀ must be reported in lb/MMBtu.
- (9) As a result of the most recent performance test performed in H.4.a.(1) through (3) of this section, derive emission factors for each of the following:
 - (i). Pounds of PM per ton of coal (lbs-PM/tons-coal).
 - (ii). Pounds of PM₁₀ per ton of coal (lbs-PM₁₀/tons-coal).

These emissions factors will be based on the average of the 3 test runs.

- (10) Within 60 days after completing the performance tests and opacity observations contained in H.4.a. of this section, *the Permittee* shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3485 (NAC 445B.252.8).



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

b. **Monitoring**

The Permittee, upon issuance of this operating permit will:

- (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of sub-bituminous and/or bituminous coal (in tons) combusted in **S2.004**. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.004**.
- (2) Install, calibrate, operate and maintain a fuel flow meter to continuously record the mass amount (in pounds-mass) of No. 2 distillate fuel oil combusted in **S2.004**. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in **S2.004** in accordance with the requirements prescribed in 40 CFR Part 75.
- (3) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of sub-bituminous and/or bituminous coal as measured by the coal mass measurement device and the mass amount (in pounds-mass) of the No. 2 distillate fuel oil as measured by the fuel flow meter required in H.4.b.(1) & (2) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
- (4) Perform coal sampling of the coal prior to it entering the boiler. Sampling shall be conducted for moisture, ash, sulfur content, and gross calorific value. A coal analysis shall be performed weekly and the results of these analyses shall be retained for at least two years following the date of the measurement. All sample collection, sample preparation, and analyses performed or caused to be performed shall be conducted according to the most current ASTM methods (*PSD permit requirement VIII.E. issued January 3, 1980*).
- (5) Perform coal sampling of the sub-bituminous and/or bituminous coal weekly according to section 12.5.3.2.2 in Method 19 in appendix A to Part 60 and use ASTM Method D2234-89, "Standard Test Methods for Collection of a Gross Sample of Coal." Determine the gross calorific value of the sub-bituminous and/or bituminous coal combusted by sampling at least once weekly, using ASTM D2013-86, "Standard Method of Preparing Coal Samples for Analysis", ASTM D2015-91, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter", ASTM 1989-92, "Standard test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters", or ASTM 3286-91a, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."
- (6) Using either the Flow Proportional or Daily Method described in 40 CFR Part 75, Appendix D 2.2.2, 2.2.3, or 2.2.4 prepare a daily sample representative of the No. 2 distillate fuel oil combusted in **S2.004** for each day of operation while combusting that fuel. The sulfur content of the daily fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D. The fuel oil gross calorific value of this daily sample will be determined in accordance with ASTM D240-87 (Re-approved 1991), "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter" or ASTM D2382-88, "Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method) and the requirements prescribed in 40 CFR Part 75, Appendix F, Section 3.3.6.2." Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.
- (7) Substitute any missing fuel flow meter data in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.2. Substitute any missing sulfur content data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1. Substitute any missing gross calorific value data for the No. 2 distillate fuel oil in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D, Section 2.4.1.



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

b. **Monitoring (continued)**

- (8) Install, calibrate, operate and maintain a SO₂ continuous emissions monitor system (CEMS) (consisting of a SO₂ pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration and percent reduction of SO₂ (in ppm), percent reduction, volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu) from **S2.004**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.004** to accurately and continuously measure the SO₂ concentration in **S2.004** in accordance with the requirements prescribed in 40 CFR Part 60.47a(b), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. SO₂ emissions are monitored at both the inlet and outlet of the sulfur dioxide control device. The procedures established in 40 CFR Part 60.47a(i) shall be used to conduct monitoring system performance evaluations.
- (9) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the SO₂ concentration (in ppm), SO₂ percent reduction, volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr and lb/MMBtu), as measured by the CEMS required in H.4.b.(8) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60.47a, 40 CFR Part 60, Appendix B, Performance Specifications, 40 CFR Part 75, Part 75.11 and Appendix F.
- (10) Install, calibrate, operate and maintain a NO_x continuous emissions monitor system (CEMS) (consisting of a NO_x pollutant concentration monitor and a flow monitoring device) to continuously measure the concentration of NO_x (in ppm), volumetric gas flow (in scfh), and NO_x emissions rate (in lb/MMBtu) from **S2.004**. The CEMS will be installed at an appropriate location in the exhaust stack of **S2.004** to accurately and continuously measure the NO_x concentration in **S2.004** in accordance with the requirements prescribed in 40 CFR Part 60.47a(c), 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F. The NO_x CEMS installed to meet the requirements of 40 CFR Part 75 may be used to meet the requirements of 40 CFR Part 60.47(c). The requirements established in 60.49a continue to apply, except that the permittee shall also meet the requirements of 40 CFR Part 60.49a shall not include data substituted using the missing data procedures in subpart D of 40 CFR Part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75. The procedures established in 40 CFR Part 60.47a(i) shall be used to conduct monitoring system performance evaluations.
- (11) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the NO_x concentration (in ppm), volumetric gas flow (in scfh), and NO_x emissions rate (in lb/MMBtu), as measured by the CEMS required in H.4.b.(10) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in 40 CFR Part 60, Appendix B, Performance Specification 2, 40 CFR Part 75, Part 75.11 and Appendix F.
- (12) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored (40 CFR Part 60.47a(d)).
- (13) Install, calibrate, operate and maintain a continuous opacity monitoring system to continuously measure and record the opacity from **S2.004**. The continuous opacity monitoring system will be installed at an appropriate location in the discharge stack of **S2.004** to accurately and continuously measure the opacity of **S2.004** in accordance with the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.47a(a), 40 CFR Part 60, Appendix B, Performance Specification 1, and 40 CFR Part 75.10. If opacity interference due to water droplets exists in the stack, the opacity is monitored upstream of the interference.



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

b. **Monitoring (continued)**

(14) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as measured by the continuous opacity monitoring system required in H.4.b.(13) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications and the requirements prescribed in NAC 445B.256 to NAC 445B.267, 40 CFR Part 60.47a(a), 40 CFR Part 60, Appendix B, Performance Specification 1, 40 CFR Part 75.10 and 40 CFR Part 75.14.

c. **Recordkeeping**

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.004** is operating under this operating scenario:

- (1) The name of the operating scenario, the type(s) of fuel(s) combusted and the calendar date of any required monitoring, including the date and time of switching from one operating scenario to another.
- (2) The total hourly quantity of co-fired sub-bituminous and/or bituminous coal (in tons) and the mass amount of No. 2 distillate fuel oil in pounds-mass (lbm) combusted, for each hour of operation based on the data recorded by the CDCS as required in H.4.b.(3) of this section.
- (3) The total daily hours of operation for the corresponding date.
- (4) The heat content of each fuel combusted for the corresponding date, in Btu/ton (coal) and Btu/pound (No. 2 distillate fuel oil). The heat content for each fuel will be based on the gross calorific value determined in H.4.b.(5) & (6) of this section.
- (5) The hourly heat input of the co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated from the hourly fuel usage rates recorded in H.4.c.(2) of this section, and the heat content of the fuel as recorded in H.4.c.(4) of this section.

Sample Calculation:

$$(\text{tons-coal/hr})(\text{Btu/ton-coal}) = \text{Btu/hr or MMBtu/hr}$$

$$(\text{lbm-No. 2 Distillate/hr})(\text{Btu/lbs}) = \text{Btu/hr or MMBtu/hr - No. 2 Distillate}$$

Sum:

$$\text{MMBtu/hr - Coal} + \text{MMBtu/hr - No. 2 Distillate} = \text{Hourly Heat Input in MMBtu/hr}$$

- (6) The hourly emission rate of PM and PM₁₀ each, in pounds per MMBtu (lbs/MMBtu). The hourly emission rates will be calculated from the hourly quantity of co-fired sub-bituminous and/or bituminous coal and No. 2 distillate fuel oil determined in H.4.b.(3) of this section, and the emission factor derived in H.4.a.(9) of this section.

Sample Calculation:

$$(\text{tons-coal/Btu})(\text{lbs-PM/tons-coal}) = \text{lbs-PM/Btu or lbs-PM/MMBtu}$$

$$(\text{lbm-No. 2 Distillate/Btu})(\text{lbs-PM/lbm-No. 2 Distillate}) = \text{lbs-PM/Btu or lbs-PM/MMBtu - No. 2 Distillate}$$

Sum:

$$\text{lbs-PM/MMBtu - Coal} + \text{lbs-PM/MMBtu - No. 2 Distillate} = \text{Hourly Emission Rate in lbs-PM/MMBtu}$$



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Section VI. Specific Operating Conditions (continued)

H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

c. **Recordkeeping (continued)**

- (7) The emission rates of sulfur and SO₂ each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMbtu) measured by the CEMS required in H.4.b.(8) of this section, for each averaging period described below:
 - (i). The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO₂ emissions measured.
 - (ii). The Sulfur and SO₂ emissions in pounds per million Btu (lbs/MMBtu) and the percent reduction levels for each 30-day rolling average period. The compliance determination procedures established in 40 CFR Part 60.48a(c) will be used to convert the continuous monitoring data into units of the applicable standards (lb/MMBtu, 30-day rolling average period and percent reduction).
- (8) The hourly emissions rate of NO_x in pounds per million Btu (lbs/MMBtu) and the percent reduction levels for each 30-day rolling average period measured by the CEMS required in H.4.b.(10) of this section. The compliance determination procedures established in 40 CFR Part 60.48a(d) will be used to convert the continuous monitoring data into units of the applicable standard (lb/MMBtu, 30-day rolling average period and percent reduction).
- (9) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in H.4.b.(13) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
 - (i). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.1(b) and as set forth in 40 CFR Part 60.13(h).
 - (ii). Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42a(b).



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H. Emission Unit #S2.004 - Alternative Operating Scenario: Co-Firing Coal and No. 2 Distillate Fuel Oil (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Compliance, Monitoring, Recordkeeping and Reporting

d. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
- (5) Report the results of the performance tests and opacity observations required in H.4.a.(10) of this section.
- (6) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - Submit a written report of excess emissions to the Administrator and the Director every calendar quarter. The report shall include:
 - (i). The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
 - (ii). Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
 - (iii). The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (iv). When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - (v). Reid Gardner Unit #4 is subject to the federal regulations entitled "Standards of Performance for New Stationary Sources" (40 CFR Part 60). Nevada Power Company shall comply with all requirements of Subpart Da of this regulation.
 - (vi). **The Permittee** shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- (7) Federally Enforceable New Source Performance Standard Requirement - Submit reports in accordance with the provisions established in 40 CFR Part 60.49a.
- (8) Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) - The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Shielded Requirements
No specific shield requested.



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Section VI. Specific Operating Conditions (continued)

I. *Emission Units #S2.005 through S2.008*

UTM: North 4059.35 km, East 711.68 km (Zone 11)

System 05 Cooling Towers - Units #1 through #4

- S2.005** *Reid Gardner Unit #1 Cooling Tower (CT-01), Positive Draft Type, Marley Model and Serial# unknown, In Service 1965, 63,800 gallon/min Circulating Water Flow Rate*
- S2.006** *Reid Gardner Unit #2 Cooling Tower (CT-02), Positive Draft Type, Marley Model and Serial# unknown, In Service 1968, 63,800 gallon/min Circulating Water Flow Rate*
- S2.007** *Reid Gardner Unit #3 Cooling Tower (CT-03), Positive Draft Type, Marley Model and Serial# unknown, In Service 1976, 63,800 gallon/min Circulating Water Flow Rate*
- S2.008** *Reid Gardner Unit #4 Cooling Tower (CT-04), Positive Draft Type, Marley Model and Serial# unknown, In Service 1983, 131,000 gallon/min Circulating Water Flow Rate*

1. NAC 445B.3405 (NAC 445B.316)
Air Pollution Equipment (Part 70 Program)
Emissions from **S2.005** through **S2.008** each will be controlled by drift eliminators.
2. NAC 445B.3405 (NAC 445B.316) (Part 70 Program)
Emission Limits
 - a. On and after the date of startup of **S2.005** through **S2.008**, *The Permittee* will not discharge or cause the discharge into the atmosphere from the cooling tower stack of **S2.005** through **S2.008** each, the following pollutants in excess of the following specified limits:
 - (1) (i). NAC 445B.305 Part 70 Program - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.005** through **S2.007** each, will not exceed 51.5 pounds per hour.
 - (ii). NAC 445B.305 Part 70 Program - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.008** will not exceed 105.8 pounds per hour.
 - (2) (i). NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.005** and **S2.006** each, will not exceed 119.24 pounds per hour.
 - (ii). NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.007**, will not exceed 119.93 pounds per hour.
 - (iii). NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.008** will not exceed 132.72 pounds per hour.
 - (3) (i). SIP 445.732 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere from **S2.005** and **S2.006** each, will not exceed 119.24 pounds per hour.
 - (ii). SIP 445.732 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere from **S2.007** will not exceed 119.93 pounds per hour.
 - (iii). SIP 445.732 Federally Enforceable SIP - The discharge of PM (particulate matter) to the atmosphere from **S2.008** will not exceed 132.72 pounds per hour.
 - (4) NAC 445B.22017 State-Only Requirement - The opacity from of **S2.005** through **S2.008** each, will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
 - (5) SIP 445.721 Federally Enforceable SIP - The opacity from **S2.005** through **S2.008** each, will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.



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Section VI. Specific Operating Conditions (continued)

I. Emission Units #S2.005 through S2.008 (continued)

3. NAC 445B.3405 (NAC 445B.316) (Federally Enforceable Part 70 Program)

Operating Parameters

- a. (1) The maximum circulating water flow rate for **S2.005** through **S2.007** each, will not exceed 63,800 gallons per minute.
- (2) The maximum circulating water flow rate for **S2.008** will not exceed 131,000 gallons per minute.
- b. (1) The maximum Total Dissolved Solids (TDS) content for **S2.005** through **S2.008** each, will not exceed 8,500 milligrams per liter (8,500 ppm).
- c. The use of chromium-based water treatment chemicals is prohibited.
- d. **S2.005** through **S2.008** each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (NAC 445B.316) (Federally Enforceable Part 70 Program)

Monitoring, Record keeping and Compliance

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.005** through **S2.008** are operated:

a. **Monitoring**

The Permittee, upon the issuance date of this operating permit will:

- (1) Sample the cooling tower water from **S2.005** through **S2.008** each, on a calendar quarterly basis for the TDS concentration in parts per million (ppm). The TDS will be determined using EPA Method 160.1 DNS.

b. **Recordkeeping**

The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that **S2.005** through **S2.008** each are operating under this operating scenario:

- (1) The TDS value of the circulating water of **S2.005** through **S2.008** each on a calendar quarterly basis. The TDS value will be based on the sampling required in I.4.a. of this section.
- (2) The volume flow rate of the circulating water of **S2.005** through **S2.008** each, on an hourly basis.
- (3) The total hourly quantities of water circulated for each hour of each day **S2.005** through **S2.008** operates.
- (4) The total daily hours of operation of **S2.005** through **S2.008** for the corresponding date.
- (5) Inspect and record in a contemporaneous log the maintenance and operation of the drift eliminators of **S2.005** through **S2.008** each in accordance with the manufacturer's guidelines on an annual basis. Annual inspection records must show that observations were made and include records of any corrective actions taken.

c. **Reporting**

The Permittee will:

- (1) Report all excess emissions as required in Sections III.B and III.C of this operating permit.
- (2) Report all deviations as required in Section V.C of the operating permit.
- (3) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
- (4) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.

5. NAC 445B.3405 (NAC 445B.316) (Federally Enforceable Part 70 Program)

Shielded Requirements

No specific shield requested.



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Section VI. Specific Operating Conditions (continued)

J. Emission Unit # S2.009

UTM: North 3995.5 km, East 675.5 km

System 06 No. 2 Distillate Fuel Storage Tank System

S2.009 Storage Tank with No. 2 Distillate Fuel Oil, Manufacturer, Model# and Serial# Unknown. Installed 1964. 860,000-gallon capacity.

1. NAC 445B.316 Part 70 Program
Air Pollution Equipment

Control system consisting of submerged fill.
2. NAC 445B.316 Part 70 Program
Emission Limits
On and after the date of startup of S2.009, the Permittee will not discharge or cause the discharge into the atmosphere from exhaust vent of S2.009, the following pollutants in excess of the following specified limits:
 - a. NAC 445B.305 (Federally Enforceable Part 70 Program) - The discharge of VOC to the atmosphere from S2.009 will not exceed 1.4 tons per calendar year.
 - b. SIP 445.721 (Federally Enforceable SIP Requirement) - The opacity from S2.009 will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one-hour period.
 - e. NAC 445B.22017 State-Only Requirement - The opacity from S2.009 will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b).
3. NAC 445B.316 (Federally Enforceable Part 70 Program)
Operating Parameters
 - a. S2.009
 - (1) May store No. 2 distillate fuel oil only.
 - (2) Maximum throughput will not exceed 420,000,000 gallons per calendar year.
 - (3) May operate 8,760 hours per year.
4. NAC 445B.316 Part 70 Program
Monitoring, Record keeping and Compliance
Upon issuance of this permit, the Permittee will:
 - a. Monitor and record in a contemporaneous log, the total fuel oil throughput for S2.009 on a monthly basis for the calendar year.
5. NAC 445B.316 Part 70 Program
Shielded Requirements
 - a. None Requested



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Section VI. Specific Operating Conditions (continued)

K. Emission Unit #PF1.001.

UTM: North 4,059.35 km, East 711.68 (Zone 11).

System 07 – Coal Unloading Station & Coal Conveying Equipment

PF1.001 Coal Train car Unloading Station (C-05) manufactured by McNalley-Pittsburgh.

Includes:

- Rail car unloading hoppers A1 #1-3 and A2 #1-7;
- Conveyor belts B, C, F, N, G, H, J, D, E, M and K;
- Flop gates F/C, G/N, and K/M;
- Feeders D, E, H-1 and H-2;
- “As-received” coal sampler and sample collector;
- “As-fired” coal sampler and sample collector;
- Unit #1-3 Coal storage pile(s); and
- Associated transfer points

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment

- a. Control system for **PF1.001** consisting of water sprays applying water with added surfactant at transfer points and coal storage piles.
- b. Fully-enclosed covers over conveyors.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **PF1.001**, Nevada Power Company - Reid Gardner Station will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **PF1.001** will not exceed **90.06** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.001** will not exceed **90.06** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.001** will not exceed 37.1 pounds per hour nor more than 50.6 tons per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - The opacity from **PF1.001** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any one hour.
- e. NAC 445B.22017 & NAC 445B.355 State Only Requirements - The opacity from **PF1.001** will not equal or exceed **20%** for a period or periods aggregating more than 3 minutes in any one hour.
- f. 40 CFR 60.252(c) NSPS Regulation - On and after the date on which the performance test required to be conducted by Section 60.8 is completed, an owner or operator subject to the provisions of NSPS Subpart Y (Coal Preparation Plants) shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.



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Section VI. Specific Operating Conditions (continued)

K. Emission Unit #PF1.001. (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of coal in **PF1.001** will not exceed **2,500** tons per hour.
- b. Hours
 1. **PF1.001** may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping, Compliance and Reporting

a. Monitoring, Recordkeeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of coal for **PF1.001** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.001** on a daily basis.
- iii. Within 30 days of the issuance of this operating permit, the Permittee shall submit a visual observation plan to be approved by the director. The observation plan shall identify multiple observation points from where the visible emission sources, excluding emissions sources located and operated inside a building shall be monitored. The visual observations shall be conducted once every two-calendar weeks. All of the visible emission sources associated with each observation point shall be specifically identified in within the observation plan.
- iv. A certified Method 9 observer shall conduct and record a visible emission survey of visible emissions from the emission sources, in accordance with the submitted observation plan, once every two-calendar weeks, under normal representative operating conditions. Record the time and date of the survey and whether any visible emissions were observed. If the visible emission survey detects any visible emissions, the Permittee will conduct a Method 9 visible emissions reading conducted by a certified visible emissions reader within 4 hours of the initial visible observation survey, including all documents required under 40 CFR Part 60, Appendix A.
- v. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that PF1.001 is operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of coal, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of coal, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Results and verification of the visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.
- vi. As a means of showing initial compliance with the NSPS Subpart Y opacity limit prescribed in k.2.f. of this section, within 180 days from the date of issuance of this operating permit, conduct and record a Method 9 Initial Opacity Compliance Demonstration (IOCD) for all emission Units that support boiler Unit #3 using the procedures in Section 60.11 to determine the opacity from the discharge of **PF1.002** to the atmosphere. The Method 9 IOCD shall be performed and recorded by a certified opacity reader.



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Section VI. Specific Operating Conditions (continued)

K. Emission Unit #PF1.001. (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping, Compliance and Reporting (continued)

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

L. Emission Unit #PF1.002.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 08 – Coal Unloading Station & Coal Conveying Equipment

PF1.002 Loading of Unit #4 Coal Conveying (C-06a) manufactured by McNalley-Pittsburgh.

Includes:

- Unit #4 coal storage pile(s)
- Feeders 0-1A, 0-1B, 0-2B and 0-2A;
- Conveyors 0-1, 0-2, P-1 and P-2; and
- Associated transfer points.

1. NAC 445B.3405 (445B.316) Part 70 Program

Air Pollution Equipment

- a. Control system for **PF1.002** consisting of water sprays applying water with added surfactant at transfer points and coal storage piles.
- b. Fully-enclosed covers over coal conveyors.

2. NAC 445B.3405 (445B.316) Part 70 Program

Emission Limits

On and after the date of startup of **PF1.002**, Nevada Power Company - Reid Gardner Station will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **PF1.002** will not exceed **82.02** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **PF1.002** will not exceed **82.02** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.002** will not exceed 0.2 pound per hour nor more than 0.02 ton per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - The opacity from **PF1.002** discharge will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- e. NAC 445B.22017, & NAC445B.355 State Only Requirements - The opacity from PF1.002 discharges will not equal or exceed 20% for a period or periods aggregating more than 3 minutes in any one hour.
- f. 40 CFR 60.252(c) NSPS Regulation - On and after the date on which the performance test required to be conducted by Section 60.8 is completed, an owner or operator subject to the provisions of NSPS Subpart Y (Coal Preparation Plants) shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.



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Section VI Specific Operating Conditions (continued)

L. Emission Unit #PF1.002 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of coal in **PF1.002** will not exceed **1,400** tons per hour.
- b. Hours
 1. **PF1.002** may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of coal for **PF1.002** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.002** on a daily basis.
- iii. Within 30 days of the issuance of this operating permit, the Permittee shall submit a visual observation plan to be approved by the director. The observation plan shall identify multiple observation points from where the visible emission sources, excluding emissions sources located and operated inside a building shall be monitored. The visual observations shall be conducted once every two-calendar weeks. All of the visible emission sources associated with each observation point shall be specifically identified in within the observation plan.
- iv. A certified Method 9 observer shall conduct and record a visible emission survey of visible emissions from the emission sources, in accordance with the submitted observation plan, once every two-calendar weeks, under normal representative operating conditions. Record the time and date of the survey and whether any visible emissions were observed. If the visible emission survey detects any visible emissions, the Permittee will conduct a Method 9 visible emissions reading conducted by a certified visible emissions reader within 4 hours of the initial visible observation survey, including all documents required under 40 CFR Part 60, Appendix A.
- v. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.002** is operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of coal, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of coal, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Results and verification of the visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.
- vi. As a means of showing initial compliance with the NSPS Subpart Y opacity limit prescribed in L.2.f. of this section, within 180 days from the date of issuance of this operating permit, conduct and record a Method 9 Initial Opacity Compliance Demonstration (IOCD) using the procedures in Section 60.11 to determine the opacity from the discharge of **PF1.002** to the atmosphere. The Method 9 IOCD shall be performed and recorded by a certified opacity reader.



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Section VI Specific Operating Conditions (continued)

L. Emission Unit #PF1.002 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting (continued)
 - b. Reporting
 - i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.
5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

M. Emission Units # S2.010 and PF1.003.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 09 - Units #1-3 Coal Storage Silos (C-01)

S2.010 Loading of (12) Coal Silos for Units #1-3 (C-01a), manufactured by McNalley-Pittsburgh, model #512K-8.

PF1.003 Unloading of (12) Coal Silos for Units #1-3 (C-01b), manufactured by McNalley-Pittsburgh, model #512K-8.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment

- a. Emissions from **S2.010** shall be ducted to silo vent fabric filters with 100% capture efficiency installed on each silo.
- b. Control system for **PF1.003** consisting of an enclosure.
- c. **S2.010** shall be located in fully-enclosed (tripper-room) building.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.010 and PF1.003**, Nevada Power Company - Reid Gardner Station will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **S2.010** will not exceed **90.06** pounds per hour. The discharge of PM to the atmosphere from **PF1.003** will not exceed **55.63** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.010** will not exceed **90.06** pounds per hour. The discharge of PM₁₀ to the atmosphere from **PF1.003** will not exceed **55.63** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.010 and PF1.003** combined will not exceed 0.2 pound per hour nor more than 0.1 ton per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
- e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.010, and PF1.003** each, to the atmosphere will not equal or exceed 20%.
- f. 40 CFR 60.252(c) NSPS Regulation - On and after the date on which the performance test required to be conducted by Section 60.8 is completed, an owner or operator subject to the provisions of NSPS Subpart Y (Coal Preparation Plants) shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.



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Section VI. Specific Operating Conditions (continued)

M. Emission Units # S2.010 and PF1.003 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of coal in **S2.010** will not exceed **1,650** tons per hour.
- b. Maximum allowable throughput of coal in **PF1.003** will not exceed **152.8** tons per hour.
- c. Hours
 1. **S2.010 and PF1.003** each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of coal for **PF1.003 and S2.010 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.003 and S2.010 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.003 and/or S2.010** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of coal, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of coal, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Results and verification of the visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.
- iv. As a means of showing initial compliance with the NSPS Subpart Y opacity limit prescribed in M.2.f. of this section, within 180 days from the date of issuance of this operating permit, conduct and record a Method 9 Initial Opacity Compliance Demonstration (IOCD) using the procedures in Section 60.11 to determine the opacity from the discharge of **S2.010** to the atmosphere. The Method 9 IOCD shall be performed and recorded by a certified opacity reader.



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Section VI. Specific Operating Conditions (continued)

M. Emission Units # S2.010 and PF1.003 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping and Compliance (continued)
 - v. On an annual basis for **PF1.003**, perform and record visible emissions inspections at the point of transfer of coal from the coal storage silos to the boiler coal mills, while coal is being discharged from the silos. If these visible emissions inspections document any opacity discharged to the atmosphere greater than **0%** from the enclosed transfer points, provide immediate corrective action in the affected transfer enclosures. Annual visible emissions inspection records must show that observations were made and include records of any corrective actions taken.
 - vi. On an annual basis, perform an inspection of the **PF1.003** coal silo discharge enclosures for each of the coal storage silos. Annual enclosure inspection records must show that observations were made and include records of any corrective actions taken.
 - vii. On an annual basis, perform an inspection of the **S2.010** coal silo fabric bag filter for each of the coal storage silos. Annual bag inspection records must show that observations were made and include records of any corrective actions taken.
- b. Reporting
 - i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.
5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

N. *Emission Units # S2.011 and PF1.004.*

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 10 - Unit #4 Coal Storage Silos (C-02)

S2.011 Loading of (8) Coal Silos for Unit #4 (C-02a), manufactured by McNalley-Pittsburgh.

PF1.004 Unloading of (8) Coal Silos for Unit #4 (C-02b), manufactured by McNalley-Pittsburgh.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.011** shall be ducted to silo vent fabric filters with 100% capture efficiency installed on each silo.
 - b. Control system for **PF1.004** consisting of an enclosure.
 - c. **S2.011** shall be located in fully enclosed (cascade room) building.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.011** and **PF1.004**, Nevada Power Company - Reid Gardner Station will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.011** will not exceed **82.02** pounds per hour. The discharge of PM to the atmosphere from **PF1.004** will not exceed **53.40** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.011** will not exceed **82.02** pounds per hour. The discharge of PM₁₀ to the atmosphere from **PF1.004** will not exceed **53.40** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.011** and **PF1.004** combined will not exceed 0.2 pound per hour nor more than 0.1 ton per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.011**, and **PF1.004** to the atmosphere, **each**, will not equal or exceed 20%.
 - f. 40 CFR 60.252(c) NSPS Regulation - On and after the date on which the performance test required to be conducted by Section 60.8 is completed, an owner or operator subject to the provisions of NSPS Subpart Y (Coal Preparation Plants) shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.



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Section VI. Specific Operating Conditions (continued)

N. Emission Units # S2.011 and PF1.004 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of coal in **S2.011** will not exceed **1,800** tons per hour.
- b. Maximum allowable throughput of coal in **PF1.004** will not exceed **123.2** tons per hour.
- c. Hours
 - i. **S2.011 and PF1.004** each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of coal for **PF1.004 and S2.011 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.004 and S2.011 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.004 and/or S2.001** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of coal, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of coal, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Results and verification of the visible emissions survey, and documentation of any Method 9 visible emission tests that were undertaken, including all documents required under 40 CFR Part 60, Appendix A.
- iv. As a means of showing initial compliance with the NSPS Subpart Y opacity limit prescribed in M.2.f. of this section, within 180 days from the date of issuance of this operating permit, conduct and record a Method 9 Initial Opacity Compliance Demonstration (IOCD) using the procedures in Section 60.11 to determine the opacity from the discharge of **S2.011** to the atmosphere. The Method 9 IOCD shall be performed and recorded by a certified opacity reader.
- v. On an annual basis for **PF1.004**, perform and record visible emissions inspections at the point of transfer of coal from the coal storage silos to the boiler coal mills, while coal is being discharged from the silos. If these visible emissions inspections document any opacity discharged to the atmosphere greater than **0%** from the enclosed transfer points, provide immediate corrective action in the affected transfer enclosures. Annual visible emissions inspection records must show that observations were made and include records of any corrective actions taken.
- vi. On an annual basis, perform an inspection of the **PF1.003** coal silo discharge enclosures for each of the coal storage silos. Annual enclosure inspection records must show that observations were made and include records of any corrective actions taken.
- vii. On an annual basis, perform an inspection of the **S2.010** coal silo fabric bag filter for each of the coal storage silos. Annual bag inspection records must show that observations were made and include records of any corrective actions taken.



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Section VI. Specific Operating Conditions (continued)

N. Emission Units # S2.011 and PF1.004 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping, Compliance and Reporting (continued)
 - b. Reporting
 - i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.
5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

O. Emission Units # PF1.005 through # PF1.008.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 11 - Coal Crushing & Screening Station (C-03)

PF1.005 Coal Granulation Crusher #1 (C-03a), manufactured by Pennsylvania Co., model #TKKB, serial #4149.

PF1.006 Coal Granulation Crusher #2 (C-03b), manufactured by Pennsylvania Co., model #TKKB, serial #4150.

PF1.007 Coal Granulation Crusher #3 (C-03c), manufactured by Pennsylvania Co., model #TK-9-388, serial #3101.

PF1.008 Link Belt Coal Screen (C-03d), manufactured by FMC, model #823513-Z.

1. NAC 445B.3405 (445B.316) Part 70 Program

Air Pollution Equipment

a. Control systems for **PF1.005 through PF1.008** each shall consist of water sprays installed at PF1.005, PF1.006, PF1.007 and PF1.008.

2. NAC 445B.3405 (445B.316) Part 70 Program

Emission Limits

On and after the date of startup of **PF1.005 through PF1.008**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **PF1.005 through PF1.007**, each, will not exceed **80.51** pounds per hour. The discharge of PM to the atmosphere from **PF1.008** will not exceed **90.06** pounds per hour.

b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.005 through PF1.007**, each, will not exceed **80.51** pounds per hour. The discharge of PM₁₀ to the atmosphere from **PF1.008** will not exceed **90.06** pounds per hour.

c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.005 through PF1.007** each will not exceed 0.7 pound per hour, nor more than 0.04 ton per year. The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **PF1.008** will not exceed 2.1 pounds per hour, nor more than 0.1 ton per year.

d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.

e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **PF1.005 through PF1.008** to the atmosphere, **each**, will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

O. Emission Units # PF1.005 through # PF1.008 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of coal in **PF1.005 through PF1.007**, each, will not exceed **1,250** tons per hour, averaged on a daily basis.
- b. Maximum allowable throughput of coal in **PF1.008** will not exceed **2,500** tons per hour, averaged on a daily basis.
- c. Hours
 1. **PF1.005 through PF1.008** each may operate **100** hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of coal for **PF1.005 through PF1.007 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.005 through PF1.007 each** on a daily basis.
- iii. The required monitoring established in (i.) through (iv.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.005 through PF1.007** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of coal, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of coal, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

P. Emission Units #S2.012 and PF1.009.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 12 - Units #1-3 Fly Ash Storage Silos (C-04)

S2.012 Loading of Fly Ash Silo for Units #1-3 (C-04a), manufactured by United Conveyor Corp.

PF1.009 Unloading of Fly Ash Silo for Units #1-3 (C-04a), manufactured by United Conveyor Corp.

1. NAC 445B.3405 (445B.316) Part 70 Program

Air Pollution Equipment

- a. Emissions from **S2.012** shall be ducted to a pulse-jet fabric filter with 100% capture efficiency installed on the fly ash silo.
- b. Control system for **PF1.009** consisting of best operational practices to ensure compliance with the emission limits stated below.

2. NAC 445B.3405 (445B.316) Part 70 Program

Emission Limits

On and after the date of startup of **S2.012 and PF1.009, each**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **S2.012 and PF1.009 each** will not exceed **17.20** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.012 and PF1.009 each** will not exceed **17.20** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.012 and PF1.009 combined** will not exceed 0.6 pound per hour nor more than 4.4 ton per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is of an opacity equal to or greater than 20 percent.
- e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges **S2.012 and PF1.009 each**, to the atmosphere will not equal or exceed 20%.

3. NAC 445B.3405 (445B.316) Part 70 Program

Operating Parameters

- a. Maximum allowable throughput of fly ash in **S2.012 and PF1.009 each** will not exceed **8.5** tons per hour.
- b. Hours
 1. **S2.012 and PF1.009 each** may operate 8,760 hours per calendar year.



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Section VI. Specific Operating Conditions (continued)

P. Emission Units #S2.012 and #PF1.009 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of fly ash for **PF1.009 and S2.012 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.009 and S2.012 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.009 and/or S2.012** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of fly ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of fly ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Calculate fly ash throughput in tons as follows: [8.5 tons per hour] x [hours of operation] x [baghouse control efficiency]. The value for baghouse control efficiency shall be from a written manufacturer's guarantee, or a NDEP-BAPC approved performance test of the baghouse under permitted conditions or the NDEP-BAPC standard control efficiency rating for a properly maintained baghouse of 0.02 grains/dscf. Record what method is used to obtain baghouse control efficiency.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

Q. Emission Units #S2.013 and PF1.010.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 13 - Units #1-3 Backup Fly Ash Storage Silos (C-07)

S2.013 Loading of Backup Fly Ash Silo for Units #1-3 (C-07a), manufactured by Smoot Co. Inc.

PF1.010 Unloading of Backup Fly Ash Silo for Units #1-3 (C-07a), manufactured by Smoot Co. Inc.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.013** shall be ducted to a pulse-jet fabric filter with 100% capture efficiency installed on the fly ash silo.
 - b. Control system for **PF1.010** consisting of best operational practices to ensure compliance with the emission limits stated below.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.013 and PF1.010, each**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.013** will not exceed **13.62** pounds per hour. The discharge of PM to the atmosphere from **PF1.010** will not exceed **44.39** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.013** will not exceed **13.62** pounds per hour. The discharge of PM₁₀ to the atmosphere from **PF1.010** will not exceed **44.39** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10microns in diameter) to the atmosphere from **S2.013 and PF1.010 combined** will not exceed 0.5 pound per hour nor more than 1.8 tons per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges **S2.013 and PF1.010 each** to the atmosphere, will not equal or exceed 20%.

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters
 - a. Maximum allowable throughput of fly ash in **S2.013** will not exceed **6** tons per hour.
 - b. Maximum allowable throughput of fly ash in **PF1.010** will not exceed **35** tons per hour.
 - c. Hours
 1. **S2.013 and PF1.010 each** may operate 8,760 hours per calendar year.



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Section VI. Specific Operating Conditions (continued)

Q. Emission Units # S2.013 and PF1.010 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of fly ash for **PF1.010 and S2.013 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.010 and S2.013 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.010 and/or S2.013** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of fly ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of fly ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Calculate fly ash throughput in tons as follows: [8.5 tons per hour] x [hours of operation] x [baghouse control efficiency]. The value for baghouse control efficiency shall be from a written manufacturer's guarantee, or a NDEP-BAPC approved performance test of the baghouse under permitted conditions or the NDEP-BAPC standard control efficiency rating for a properly maintained baghouse of 0.02 grains/dscf. Record what method is used to obtain baghouse control efficiency.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

R. Emission Units #S2.014 and PF1.011.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 14 - Unit #4 Fly Ash Storage Silos (C-09)

S2.014 Loading of Fly Ash Silo for Unit #4 (C-09a), manufactured by United Conveyor Corp.

PF1.011 Unloading of Fly Ash Silo for Unit #4 (C-09b), manufactured by United Conveyor Corp.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.014** shall be ducted to a pulse-jet fabric filter with 100% capture efficiency installed on the fly ash silo.
 - b. Control system for **PF1.011** consisting of best operational practices to ensure compliance with the emission limits stated below.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.014** and **PF1.011**, each, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.014** and **PF1.011**, each, will not exceed **20.44** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.014** and **PF1.011**, each, will not exceed **20.44** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10microns in diameter) to the atmosphere from **S2.014** and **PF1.011** combined, will not exceed 0.3 pound per hour nor more than 1.7 tons per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.014** and **PF1.020** each to the atmosphere will not equal or exceed 20%.

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters
 - a. Maximum allowable throughput of fly ash in **S2.014** and **PF1.011**, each, will not exceed **11** tons per hour.
 - b. Hours
 1. **S2.014** and **PF1.011** each may operate 8,760 hours per calendar year.



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Section VI. Specific Operating Conditions (continued)

R. Emission Units # S2.014 and PF1.011 (continued)

4. NAC 445B.3405 (445B.316) Part 70 Program

Monitoring, Record keeping, Compliance and Reporting

a. Monitoring, Recordkeeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of fly ash for **PF1.011 and S2.014 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.011 and S2.014 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.011 and/or S2.014** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of fly ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of fly ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Calculate fly ash throughput in tons as follows: [11.0 tons per hour] x [hours of operation] x [baghouse control efficiency]. The value for baghouse control efficiency shall be from a written manufacturer's guarantee, or a NDEP-BAPC approved performance test of the baghouse under permitted conditions or the NDEP-BAPC standard control efficiency rating for a properly maintained baghouse of 0.02 grains/dscf. Record what method is used to obtain baghouse control efficiency.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program

Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

S. Emission Units # S2.015 and #PF1.012.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 15 – Units #1-3 Soda Ash Slurry Tank

S2.015 Loading of Units #1-3 Soda Ash Slurry Tank (W-01), manufactured by Brown-Minneapolis Tank, serial #276901.

PF1.012 Unloading of Units #1-3 Soda Ash Slurry Tank (W-01), manufactured by Brown-Minneapolis Tank, serial #276901.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment

- a. Emissions from **S2.015** shall be ducted to an inverted venturi scrubber with 100% capture efficiency installed on **S2.015**.
- b. Control system for **PF1.012** shall consist of a wet (saturated) process.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.015 and PF1.012**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM (particulate matter) to the atmosphere from **S2.015 and PF1.012 each** will not exceed **7.37** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.015 and PF1.012 each** will not exceed **7.37** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.015 and PF1.012 combined** will not exceed 0.13 pound per hour nor more than 0.54 ton per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
- e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.015 and PF1.012 each** to the atmosphere will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

S. Emission Units # S2.015 and #PF1.012 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program

Operating Parameters

- a. Maximum allowable throughput of soda ash in **S2.015** will not exceed **2.4** tons per hour.
- b. Maximum allowable throughput of soda ash solution for **PF1.012** will not exceed **2.4** tons per hour.

c. Hours

S2.015 and **PF1.012** each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program

Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of soda ash for **PF1.012** and **S2.015** each on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.012** and **S2.015** each on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.012** and/or **S2.015** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of soda ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of soda ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

5. NAC 445B.3405 (445B.316) Part 70 Program

Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

T. Emission Units # S2.016 and PF1.013.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 16 - Unit #4 FGD Soda Ash Slurry Tank

S2.016 Loading of Unit #4 FGD Soda Ash Slurry Tank (W-02), manufactured by Portec, serial #T-403-1.

PF1.013 Unloading of Unit #4 FGD Soda Ash Slurry Tank (W-02), manufactured by Portec, serial #T-403-1.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.016** shall be ducted to an inverted venturi scrubber with 100% capture efficiency installed on S2.016.
 - b. Control system for **PF1.013** shall consist of a wet (saturated) process.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.016 and PF1.013, each**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.016 and PF1.013 each** will not exceed **6.63** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.016 and PF1.013 each** will not exceed **6.63** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.016 and PF1.013 combined** will not exceed 0.11 pound per hour nor more than 0.49 ton per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.016 and PF1.013 each**, to the atmosphere will not equal or exceed 20%.



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CLASS I AIR QUALITY OPERATING PERMIT
SPECIFIC REQUIREMENTS

Issued to: Nevada Power Company—Reid Gardner Station Power Plant, as Permittee

Section VI. Specific Operating Conditions (continued)

T. Emission Units # S2.016 and #PF1.013 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of soda ash in **S2.016** will not exceed **2.05** tons per hour.
- b. Maximum allowable throughput of soda ash solution for **PF1.013** will not exceed **2.05** tons per hour.
- c. Hours
S2.016 and PF1.013 each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of soda ash for **PF1.013 and S2.016 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.013 and S2.016 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.013 and/or S2.016** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of soda ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of soda ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

U. Emission Units # S2.017 and PF1.014.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 17 – Unit #4 FGD Lime Storage Silo

S2.017 Loading of Unit #4 FGD Lime Storage Silo (W-03), manufactured by O.A. Newton, serial #276901.

PF1.014 Unloading of Unit #4 FGD Lime Storage Silo (W-03), manufactured by O.A. Newton, serial #276901.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment

- a. Emissions from **S2.017** shall be ducted to pulse-jet fabric filter with 100% capture efficiency installed on **S2.017**.
- b. Control system for **PF1.014** consisting of an enclosure.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.017 and PF1.014 each**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.017 and PF1.014 each** will not exceed **1.79** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.017 and PF1.014 each** will not exceed **1.79** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.017 and PF1.014 combined** will not exceed 0.008 pound per hour nor more than 0.03 ton per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
- e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.017 and PF1.014 each**, to the atmosphere will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

U. Emission Units # S2.017 and #PF1.014 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program

Operating Parameters

- a. Maximum allowable throughput of lime in **S2.017** will not exceed **0.29** ton per hour.
- b. Maximum allowable throughput of lime in **PF1.014** will not exceed **0.29** ton per hour.
- c. Hours
 1. **S2.010 and PF1.014** each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program

Monitoring, Recordkeeping, Compliance and Reporting

a. Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of lime for **PF1.014 and S2.017 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.014 and S2.017 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.014 and/or S2.017** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of lime, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of lime, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program

Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

V. Emission Units # S2.018 and #PF1.015.

UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 18 – Unit #4 Water Treatment Soda Ash Silo

S2.018 Loading of Unit #4 Water Treatment Soda Ash Silo (W-04), manufactured by O. A. Newton.

PF1.015 Unloading of Unit #4 Water Treatment Soda Ash Silo (W-04), manufactured by O. A. Newton.

1. NAC 445B.3405 (445B.316) Part 70 Program

Air Pollution Equipment

- a. Emissions from **S2.018** shall be ducted to pulse-jet fabric filter with 100% capture efficiency installed on **S2.018**.
- b. Control system for **PF1.015** consisting of an enclosure.

2. NAC 445B.3405 (445B.316) Part 70 Program

Emission Limits

On and after the date of startup of **S2.018 and PF1.015 each**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

- a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.018 and PF1.015 each** will not exceed **3.85** pounds per hour.
- b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.018 and PF1.015 each** will not exceed **3.85** pounds per hour.
- c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.018 and PF1.015 combined** will not exceed 0.02 pound per hour nor more than 0.06 tons per year.
- d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
- e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.018 and PF1.015 each**, to the atmosphere will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

V. Emission Units # S2.018 and #PF1.015 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program

Operating Parameters

- a. Maximum allowable throughput of soda ash in **S2.018** will not exceed **0.91** ton per hour.
- b. Maximum allowable throughput of soda ash in **PF1.015** will not exceed **0.91** ton per hour.
- c. Hours
S2.018 and PF1.015 each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program

Monitoring, Record keeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of soda ash for **PF1.015 and S2.018 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.015 and S2.018 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.015 and/or S2.018** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of soda ash, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of soda ash, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

5. NAC 445B.3405 (445B.316) Part 70 Program

Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

W. Emission Units # S2.019 and #PF1.016. UTM: North 4,059.35 km, East 711.68 km (Zone 11).

System 19 – Unit #4 FGD Backup Quicklime Storage and Feed System

S2.019 Loading of Unit #4 FGD Backup Quicklime Storage & Feed System (W-05), manufactured by Portec, model #850-QL-92.
PF1.016 Unloading of Unit #4 FGD Backup Quicklime Storage & Feed System (W-05), manufactured by Portec, model #850-QL-92.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.019** shall be ducted to fabric filter with 100% capture efficiency installed on **S2.019**.
 - b. Control system for **PF1.016** consisting of best operational practices to ensure compliance with the emission limits stated below.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.019** and **PF1.016**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.019** and **PF1.016** each, will not exceed **3.20** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.019** and **PF1.016** each, will not exceed **3.20** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S2.019** and **PF1.016** combined will not exceed 0.0021 pound per hour nor more than 0.009 ton per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.019** and **PF1.016** each, to the atmosphere will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

W. Emission Units # S2.019 and #PF1.016 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters
 - a. Maximum allowable throughput of quicklime in **S2.019** will not exceed **0.69** ton per hour.
 - b. Maximum allowable throughput of quicklime in **PF1.016** will not exceed **0.69** ton per hour.
 - c. Hours
S2.019 and PF1.016 each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Recordkeeping, Compliance and Reporting
 - a. Monitoring, Record keeping and Compliance
The Permittee, upon issuance of this operating permit will:
 - i. Monitor and record the throughput of quicklime for **PF1.016 and S2.019 each** on a daily basis.
 - ii. Monitor and record the hours of operation for **PF1.016 and S2.019 each** on a daily basis.
 - iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.016 and/or S2.019** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of quicklime, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of quicklime, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.
 - b. Reporting
 - i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:
The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.



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Section VI. Specific Operating Conditions (continued)

X. *Emission Units # S2.020 and PF1.017. UTM: North 4,059.35 km, East 711.68 km (Zone 11).*

System 20 – Unit #4 FGD Lime Storage Silo

S2.020 Loading of Unit #4 FGD Lime Storage Silo (W-06), manufactured by Portec, serial #T-406-1-A.

PF1.017 Unloading of Unit #4 FGD Lime Storage Silo (W-06), manufactured by Portec, serial #T-406-1-A.

1. NAC 445B.3405 (445B.316) Part 70 Program
Air Pollution Equipment
 - a. Emissions from **S2.020** shall be ducted to fabric filter with 100% capture efficiency installed on **S2.020**.
 - b. Control system for **PF1.017** consisting of best operational practices to ensure compliance with the emission limits stated below.

2. NAC 445B.3405 (445B.316) Part 70 Program
Emission Limits

On and after the date of startup of **S2.020 and PF1.017**, the Permittee will not discharge or cause the discharge into the atmosphere the following pollutants in excess of the following specified limits:

 - a. SIP 445.732 Federally Enforceable SIP Requirement - The discharge of PM to the atmosphere from **S2.020 and PF1.017 each**, will not exceed **3.20** pounds per hour.
 - b. NAC 445B.22033 State-Only Requirement - The discharge of PM₁₀ to the atmosphere from **S2.020 and PF1.017 each**, will not exceed **3.20** pounds per hour.
 - c. NAC 445B.305 Part 70 Program - The discharge of PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter) to the atmosphere from **S S2.020 and PF1.017 combined** will not exceed 0.02 pound per hour nor more than 0.03 ton per year.
 - d. SIP 445.721 Federally Enforceable SIP Requirement - Unless otherwise provided in SIP 445.721 inclusive, no owner or operator may cause or permit the discharge into the atmosphere from any stationary source of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour which is of an opacity equal to or greater than 20 percent.
 - e. NAC 445B.22017 (State Only Requirement) - The opacity from the discharges of **S2.020 and PF1.017 each** to the atmosphere will not equal or exceed 20%.



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Section VI. Specific Operating Conditions (continued)

X. Emission Units #S2.020 and #PF1.017 (continued)

3. NAC 445B.3405 (445B.316) Part 70 Program
Operating Parameters

- a. Maximum allowable throughput of lime in **S2.020** will not exceed **0.69** ton per hour.
- b. Maximum allowable throughput of lime in **PF1.017** will not exceed **0.69** ton per hour.
- c. Hours
S2.020 and PF1.017 each may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (445B.316) Part 70 Program
Monitoring, Record keeping, Compliance and Reporting

a. Monitoring, Recordkeeping and Compliance

The Permittee, upon issuance of this operating permit will:

- i. Monitor and record the throughput of lime for **PF1.017 and S2.020 each** on a daily basis.
- ii. Monitor and record the hours of operation for **PF1.017 and S2.020 each** on a daily basis.
- iii. The required monitoring established in (i.) through (ii.) above, will be maintained in a contemporaneous log containing at a minimum, the following record keeping for each day, or part of a day that **PF1.017 and/or S2.020** are operating:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily throughput rate of lime, in tons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The corresponding average hourly throughput rate of lime, in tons per hour. The average hourly throughput rate will be determined from the daily throughput rate and the total daily hours of operation recorded in (b) and (c) above.

b. Reporting

- i. Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80) – The following reporting requirement applies only to Section VIII of the PSD Permit issued 1/3/80:

The Regional Administrator (*USEPA*) shall be notified by telephone (*by The Permittee*) within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results an increase in emissions above any allowable emissions limit stated in Section VIII of the USEPA-issued PSD permit dated January 3, 1980 of these conditions. In addition the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of these conditions, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations, which such malfunction, may cause.

5. NAC 445B.3405 (445B.316) Part 70 Program
Shielded Requirements

No shielded provisions are established for these emission units.

*******End of Specific Operating Conditions*******



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Section VII. Emission Caps

A. No Emission Caps Defined

*******End of Emission Caps Conditions*******



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Section VIII. Surface Area Disturbance Conditions

A. NAC 445B.22035

Fugitive Dust

1. **The Permittee** may not cause or permit the handling, transporting, or storing of any material in a manner that allows or may allow controllable particulate matter to become airborne.
2. Except as otherwise provided in subsection 4, **the Permittee** may not cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, “best practical methods” includes, but is not limited to, paving, chemical stabilization, watering, phased construction, and re-vegetation.
3. Except as provided in subsection 4, **the Permittee** may not disturb or cover 5 acres or more of land or its topsoil until **the Permittee** has obtained an Operating Permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.
4. The provisions of subsections 2 and 3 do not apply to:
 - a. Agricultural activities occurring on agricultural land; or
 - b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

B. NAC 445B.305 Federally Enforceable PSD Permit Requirement (PSD Permit Issued 1/3/80)

Fugitive Dust Air Pollution Control Equipment (PSD Permit Requirements, Section VIII. Special Conditions A.5. and A.7.)

1. **The Permittee** shall install and continuously operate and maintain the following air pollution controls:
 - a. General Access Roads - All general access roads to the plant shall be paved.
 - b. Facility Roads - All roads between facilities shall be surfaced with gravel and treated with dust control chemicals.
 - c. Active Coal Storage Piles - All active coal storage piles shall be controlled with a wet suppression system using surfactants.
 - d. Inactive Coal Storage Piles - All inactive coal storage piles shall be controlled by compaction and chemical treatment if necessary.

*******End of Surface Area Disturbance Conditions*******



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Section IX. Schedules of Compliance

A. Chemical Accident Prevention Provisions

If the Permittee is not in compliance with the Chemical Accident Prevention Provisions, the permittee shall:

1. Submit a compliance schedule for meeting the requirements of 40 CFR Part 68.215 by the date provided in 40 CFR Part 68.10(a) or;
2. Submit as part of the compliance certification submitted under 40 CFR Part 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 CFR Part 68.215, including the registration and submission of the risk management plan.

B. The permittee is not in compliance with the followings:

1. Fugitive Dust Control while operating D-9 CAT at coal stockpiles.
2. Water supply is not connected to dust suppression system for the coal handling process.
3. There is no evidence of compaction or wet suppression systems, as stipulated in PSD permit issued on 1/3/80, for the coal piles.
4. The travel roads within the facility are not graveled or treated in accordance with the requirements of the PSD permit issued on 1/3/80.
5. Installation and calibration of the coal mass measuring device and Continuous Data Collection System to measure and record the quantity of coal combusted on units S2.001 – S2.004 has not been completed. These items will be completed and "in service" by June 30, 2004.

Within 10 days of issuance of this operating permit, the permittee shall submit to BAPC a dust control plan. This dust control plan will address in detail the actions that the company will carry out to bring the facility to full compliance with the items mentioned above by June 30, 2004.

*****End of Schedules of Compliance*****



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Section X. Amendments

NA

This permit:

1. Is non-transferable. (NAC 445B.287) Part 70 Program
2. Will be posted conspicuously at or near the stationary source. (NAC 445B.318)(State Only Requirement)
3. Will expire and be subject to renewal five (5) years after the issuance date of April 22, 2004. (NAC 445B.315) Part 70 Program
4. A completed application for renewal of an operating permit must be submitted to the director on the form provided by him with the appropriate fee at least 180 calendar days before the expiration date of this operating permit. (NAC 445B.323.2) Part 70 Program
5. Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)(State Only Requirement)

THIS PERMIT EXPIRES ON: April 22, 2009

Signature _____

Issued by: Mehrdad Moghimi
Supervisor, Class I Permitting Branch
Bureau of Air Pollution Control

Phone: (775) 687-4670 **Date:** 4/22/04

Class I Non-Permit Equipment List

Appended to #AP4911-0897

The Bureau of Air Pollution Control, Nevada Division of Environmental Protection only has air pollution regulatory authority over the fossil fuel fired boilers and supporting equipment at this facility. All other emission units fall under the purview of the Clark County, Department of Air Quality Management.

Unit #1&2 Emergency Diesel Generator (#G-01)	Make = Detroit Williams HP = 335 HP KW = 250 KW Fuel = Diesel Hours of Operation = < 100 Hours
Unit #3 Emergency Diesel Generator (#G-02)	Make = Waukesha HP = 168 HP KW = 125 Fuel = Diesel Hours of Operation = < 100 Hours
Unit #4 Emergency Diesel Generator (#G-03)	Make = Waukesha HP = 335 HP KW = 250 KW Fuel = Diesel Hours of Operation = < 100 Hours
Units 1-3 Coal Yard A/G Diesel Tank (#T-01)	10,000 gallons. 1985
Unit #4 Coal Yard A/G Diesel Tank (#T-02)	10,000 gallons. 1985
(2) Site Motor Vehicle Diesel Tanks (#T-04)	500 gallons. 1985