NORTH Dakota | Environmental Quality
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June 6, 2024

Mr. Benjamin Gress
Regulatory Compliance Specialist
Rainbow Energy Center, LLC
2875 Third Street SW
Underwood, ND 58576

Re: Air Quality
Title V (Renewal)
Permit to Operate

Dear Mr. Gress:

Pursuant to the Air Pollution Control Rules of the State of North Dakota, the Department of Environmental Quality has reviewed your permit renewal application dated February 6, 2024, for the Coal Creek Station located in McLean County, North Dakota.

Enclosed is a copy of the Department's draft/proposed Title V Permit to Operate and statement of basis for the facility. Before making final determinations on the permit application, the Department provides for public comment by means of the enclosed public notice, to be immediately followed by a 45-day Environmental Protection Agency (EPA) review period. As indicated in the notice, the 30-day public comment period will begin June 14, 2024 and end July 13, 2024.

If any changes are subsequently made to the draft permit, then a review copy of the proposed permit reflecting those changes will be provided to EPA prior to the start of a 45-day EPA review period. The 45-day EPA review period is scheduled to begin July 14, 2024 and end August 27, 2024.

All comments received will be considered in the final determination concerning issuance of the permit. The Department will take final action on the permit application following the public comment period and the EPA review period. You will be notified in writing of our final determination.

If you have any questions, please contact me at (701)328-5218 or email kkschneider@nd.gov.

Sincerely,

Kyla K. Schneider
Environmental Scientist
Division of Air Quality

KKS:er
Enc:
xc/enc: EPA Region 8, Air Permitting (email – r8airpermitting@epa.gov)

NOTICE OF INTENT TO ISSUE AN
AIR POLLUTION CONTROL
TITLE V
PERMIT TO OPERATE

Take notice that the North Dakota Department of Environmental Quality (NDDEQ) proposes to reissue an Air Pollution Control Permit to Operate to Rainbow Energy Center, LLC for operation of the Coal Creek Station in accordance with the ND Air Pollution Control Rules. The Coal Creek Station is located at 2875 Third Street SW, Underwood in McLean County, ND and is a utility electricity generating station. The Rainbow Energy Center, LLC mailing address is 918 E Divide Avenue, Bismarck, ND 58501. There are no changes in potential emissions.

A thirty-day public comment period for the draft permit will begin June 14, 2024 and end on July 13, 2024. Direct comments in writing to the NDDEQ, Division of Air Quality, 4201 Normandy Street 2nd Floor, Bismarck, ND 58503-1324 or email AirQuality@nd.gov, Re: Public Comment Permit No. AOP-28371 v6.0. Please note that, to be considered, comments submitted by email must be sent to the email address listed; comments sent to any other email address **will not** be considered. Comments must be received by 11:59 p.m. central time on the last day of the public comment period to be considered in the final permit determination. A public hearing regarding issuance of the permit will be held if a significant degree of public interest exists as determined by the NDDEQ. Requests for a public hearing must be received in writing by the NDDEQ before the end of the public comment period.

The notice, draft permit, statement of basis and application are available for review at the NDDEQ address and at the Division of Air Quality website at https://deq.nd.gov/AQ/PublicCom.aspx. A copy of these documents may be obtained by writing to the Division of Air Quality or contacting Kyla Schneider at (701)328-5218 or emailing kkschneider@nd.gov.

The NDDEQ will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you. To request accommodations or language assistance, contact the NDDEQ Non-discrimination/EJ Coordinator at 701-328-5150 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

Dated this 7th day of June 2024

James L. Semerad
Director
Division of Air Quality

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AIR POLLUTION CONTROL TITLE V PERMIT TO OPERATE

Permittee: **Name:** Rainbow Energy Center, LLC **Address:** 918 E Divide Avenue Bismarck, ND 58501	**Permit Number:** AOP-28371 v6.0 **Source Name:** Coal Creek Station
Source Location: 2875 Third Street SW Underwood, ND 58576-9596 Sec. 8, 9, 16, 17, T146N, R82W McLean County	**Source Type:** Electric Generating Unit; Coal
Expiration Date: September 7, 2029	

Pursuant to Chapter 23.1-06 of the North Dakota Century Code (NDCC), and the Air Pollution Control Rules of the State of North Dakota, Article 33.1-15 of the North Dakota Administrative Code (NDAC), and in reliance on statements and representations heretofore made by the permittee (i.e., owner) designated above, a Title V Permit to Operate is hereby issued authorizing such permittee to operate the emissions units at the location designated above. This Title V Permit to Operate is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department) and to any conditions specified on the following pages. All conditions are enforceable by EPA and citizens under the Clean Air Act unless otherwise noted.

Renewal: TBD

James L. Semerad
Director
Division of Air Quality

Coal Creek Station
Title V Permit to Operate
Table of Contents

1. **Emission Unit Identification**: The emission units regulated by this permit are as follows:

A. **Point Sources**:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Lignite-fired boiler (6,015 x 10^6 Btu/hr heat input) (Unit 1) (NSPS D; NESHAP/MACT UUUUU)	1	1	ESP, Wet Scrubber and Low NOx Burner
Lignite-fired boiler (6,022 x 10^6 Btu/hr heat input) (Unit 2) (NSPS D; NESHAP/MACT UUUUU)	2	2	ESP, Wet Scrubber and Low NOx Burner
Auxiliary boiler No. 91 fired on liquid fuels (172 x 10^6 Btu/hr heat input) (NESHAP/MACT DDDDD)	3	3	None
Auxiliary boiler No. 92 fired on liquid fuels (172 x 10^6 Btu/hr heat input) (NESHAP/MACT DDDDD)	4	3	None
Emergency engine generator 91 - diesel engine-driven emergency generator (rated at 3,500 bhp, manuf. Oct. 2015; Tier III certified) (NSPS IIII; NESHAP/MACT ZZZZ)	5 [A]	5	None
Diesel engine-driven emergency fire pump (nominal 399 bhp built in 2009) (NSPS IIII; NESHAP/MACT ZZZZ)	6 [A]	6	None
Lignite transfer house	7	7	Bagfilter
Lignite emergency reclaim system	8	8	Bagfilter
Lignite yard storage silos	9	9	Bagfilter
Lignite yard storage silos	10	10	Bagfilter
Crusher building (two crushers each rated at 1,500 tph)	11	11	Bagfilter
Generation building coal hopper	12	12	Bagfilter
Base of Falkirk Mining Company mine silo	13	13	Bagfilter
Generation building coal hopper	14	14	Bagfilter
Generation building coal hopper	15	15	Bagfilter
Generation building coal hopper	16	16	Bagfilter
Generation building coal hopper (NSPS Y)	17	17	Bagfilter
Fly ash silo (truck air slide)	20	20a, 20b, & 20c	Bagfilters
Fly ash silo (truck air slide)	21	21a, 21b, & 21c	Bagfilters
Fly ash railroad marketing silo	25	25a & 25b	Bagfilters
Fly ash dome	26	26a, 26b, 26c, 26d	Bagfilters
Coal dryer 26	27	27	Bagfilter
CD26 coal crusher	27a		
Coal dryer crusher building (NSPS Y)	28	36	Bagfilter
Coal dryer transfer tower (NSPS Y)	29	37	Bagfilter
Auxiliary boiler area (NSPS Y)	30	38	Bagfilter

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Coal dryer 11 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	31	39	Bagfilter
Coal dryer 12 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	32		
Coal dryer 13 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	33	40	Bagfilter
Coal dryer 14 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	34		
Coal dryer 21 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	35	41	Bagfilter
Coal dryer 22 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	36		
Coal dryer 23 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	37	42	Bagfilter
Coal dryer 24 and associated equipment with a maximum rated capacity of approximately 138 tons of coal per hour	38		
Air jig 21 (NSPS Y)	39a	43	Bagfilter
Air jig 22 (NSPS Y)	39b		
Lignite rail loading silo (NSPS Y)	40	44	Bagfilter
Lignite dust collector 98 (NSPS Y)	41	45	Bagfilter
Lignite rail loading surge hopper 91 (NSPS Y)	42	46	Bagfilter
Lignite dust collector 99 (NSPS Y)	43	47	Bagfilter
Fluidized bed pilot dryer (NSPS Y)	45	49	Bagfilter
Emergency engine generator 92 - diesel engine-driven emergency generator (rated at 3,500 bhp, manuf. Oct. 2015; Tier III certified) (NSPS IIII; NESHAP/MACT ZZZZ)	46 [A]	50	None
Air jig rejects Silo 92 (NSPS Y)	47	51	Bagfilter
Air jig rejects loadout Spout 92 (NSPS Y)	48	52	Bagfilter
Air jig rejects conveyor 921 (NSPS Y)	49	53	Bagfilter
Air jig rejects conveyor 922 (NSPS Y)	50	54	Bagfilter

[A] Insignificant emission sources (no specific emission limit). The potential to emit for an emergency stationary reciprocating internal combustion engine (RICE) is based on operating no more hours per year than is allowed by the subpart (40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ) for other than emergency situations. For engines to be considered emergency stationary RICE under the RICE rules, engine operations must comply with the operating hour limits as specified in the applicable subparts. There is no time limit on the use of emergency stationary RICE in emergency situations [40 CFR 60, Subpart IIII, §60.4211(f) and 40 CFR 63, Subpart ZZZZ, §63.6640(f)].

B. **Fugitive Emissions Sources**:

1) Cooling towers No. 91, No. 92, and No. 93

2) Boombelt conveyor (stackout)

3) Conveyor 909 (stackout)

4) Coal pile maintenance

5) Coal handling

C. **Continuous Emission/Opacity/Monitoring Systems (CEMS/COMS/CMS)**:

1) Emissions from EU 1 and EU 2 (Units 1 & 2 main stacks) are each monitored by Opacity, SO_2, NO_x, CO_2, Flow and Mercury (Hg) monitors.

2) The permittee shall calibrate, operate and maintain the CEMS/COMS/CMS equipment.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(3)(a), NDAC 33.1-15-21-09 and NDAC 33.1-15-22-03, Subpart UUUUU

2. **Applicable Standards, Restrictions and Miscellaneous Conditions:**

A. **Fuel Restrictions:**

1) EU 1 and EU 2 shall be operated using lignite coal as the primary fuel. During startup, distillate fuel oils, used oil or any combination of these fuels may be utilized. During unstable firing conditions or ignition support for placing coal elevations in and out of service, distillate fuel oils, used oil or any combination of these fuels may be utilized.

2) EU 3 and EU 4 shall be operated using only ultra-low sulfur diesel fuel (≤15 ppm sulfur), used oil (see Condition 2.A.4), or any combination of these fuels.

3) EU 5, EU 6 and EU 46 shall be operated using only ultra-low sulfur diesel fuel (≤15 ppm sulfur).

Applicable Requirements: ACP-17706 v1.0, NDAC 33.1-15-06, NDAC 33.1-15-14-06.5.b(1) and NDAC 33.1-15-12-03, Subpart IIII

4) Used oil may be burned as outlined below.

a) Combustion of Used Oil Containing Polychlorinated Biphenyls (PCBs) (State Enforceable Only): Burning of used oil in EU 1 and EU 2 containing PCBs is allowed during normal operations subject to the following:

1] The owner/operator shall file a Notification of Hazardous Waste Activity (EPA Form 8700-12) with the Department indicating used oil fuel activities.

2] Only oil which contains less than 50 ppm PCB may be burned. Burning of oil which contains PCB is only allowed for used oil generated by the permittee, its associated electric system, or its associated mining facilities.

3] Soil, rock and other earthen debris contaminated with mineral oil dielectric fluid which contains less than 50 ppm PCB may be burned during periods of stable load.

b) Used Oil Combustion: Burning of used oil in EU 1, EU 2, EU 3 and EU 4 is allowed subject to the following:

1] The burning of used oil shall comply with NDAC Sections 33.1-24-05-600 through 33.1-24-05-689 - Standards for the Management of Used Oil - and other applicable rules, regulations, and ordinances.

2] Only oil which contains less than 50 ppm PCB may be burned. Burning of oil which contains PCB is only allowed for used oil generated by the permittee, its associated electric system, or its associated mining facilities.

3] The annual emission inventory reports required by Condition 6.F shall include the amount of specification used oil burned.

Applicable Requirements: NDAC 33.1-24-05 and NDAC 33.1-15-14-06.5.b(1)

5) Fuels other than those listed above may be burned if approved in advance by the Department and compliance with the applicable emission limits is maintained.

Applicable Requirements: NDAC 33.1-15-06 and NDAC 33.1-15-14-06.5.b(1)

B. **Stack Heights:** Emissions shall be vented from the following minimum stack heights.

Emission Point	Minimum Stack Height (feet)	Applicable Requirement
36	140	ACP-17132 v1.0
37	154	
38	230	
39	300	
40	300	
41	300	ACP-17130 v1.0
42	300	
43	230	ACP-17132 v1.0
46	110	
47	131	
48	110	

Applicable Requirements: ACP-17130 v1.0 and ACP-17132 v1.0

C. **New Source Performance Standards (NSPS)**: The permittee shall comply with all applicable requirements of the following NDAC 33.1-15-12-02 and 40 CFR 60 subparts in addition to complying with Subpart A – General Provisions.

1) Subpart D – Standards of Performance of Fossil Fuel-Fired Steam Generators (EU 1 and EU 2).

2) Subpart Y – Standards of Performance for Coal Preparation and Processing Plants (EU 7 through EU 17, EU 28 through EU 30, EU 39 through EU 45 and EU 47 through EU 50).

3) Subpart IIII (4I) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (EU 5, EU 6 and EU 46).

Applicable Requirements: NDAC 33.1-15-12, Subparts A, D, Y and IIII

D. **National Emission Standards for Hazardous Air Pollutants (NESHAP)/Maximum Achievable Control Technology (MACT)**: The permittee shall comply with all applicable requirements of the following NDAC 33.1-15-22-03 and 40 CFR 63 subparts in addition to complying with Subpart A - General Provisions.

1) Subpart ZZZZ (4Z) – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU 5, EU 6 and EU 46).

2) Subpart DDDDD (5D) – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters (EU 3 and EU 4).

a) EU 3 and EU 4 (auxiliary boilers) are each classified as a *limited-use boiler*. In order to maintain *limited-use boiler* classification as defined by 40 CFR 63 Subpart DDDDD, each of the boilers shall be limited to an average annual capacity factor of no more than 10 percent as defined in 40 CFR 63.7575.

3) Subpart UUUUU (5U) – National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (EU 1 and EU 2).

Applicable Requirements: NDAC 33.1-15-22-03, Subparts A, ZZZZ, DDDDD and UUUUU

E. **Like-Kind Engine Replacement**: This permit allows the permittee to replace the existing engine(s) with a like-kind engine. Replacement is subject to the following conditions.

1) The Department must be notified within 10 days after change-out of the engine.

2) The replacement engine shall operate in the same manner, provide no increase in throughput and have equal or less emissions than the engine it is replacing.

3) The date of manufacture of the replacement engine must be included in the notification. The facility must comply with any applicable federal standards (e.g. NSPS, NESHAP, MACT) triggered by the replacement.

4) The replacement engine is subject to the same state emission limits as the existing engine in addition to any NSPS or MACT emission limit that is applicable.

Applicable Requirement: NDAC 33.1-15-14-06.5.b(1)

3. **Emission Unit Limits**:

A. **Emission Limits**:

Emission Unit Description	**EU**	**EP**	**Pollutant/ Parameter**	**Emission Limit [A]**	**NDAC Applicable Requirement**
Lignite-fired boiler (Unit 1)	1	1	PM	0.10 lb/10^6 Btu [B] & 528 lb/hr [C]	33.1-15-12, Subpart D , 33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			PM (filterable)	0.03 lb/10^6 Btu [D]	33.1-15-22-03, Subpart 5U
			SO_2	1.2 lb/10^6 Btu [B], 0.15 lb/10^6 Btu [E] (See Cond. 3.B) & 6,336 lb/hr [C]	33.1-15-12, Subpart D, ACP-17249 v1.0 & PTC 4/11/75
			NO_x	5,104 lb/hr [F]	33.1-15-14-06.5.b(1)
			HCl	0.002 lb/10^6 Btu [D] or SO_2 Surrogate: 0.2 lb/10^6 Btu [D]	33.1-15-22-03, Subpart 5U
			Hg	4.0 lb/10^{12} Btu [D]	33.1-15-22-03, Subpart 5U
			Opacity	20% [G]	33.1-15-03-02 & 33.1-15-12, Subpart D

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit [A]	NDAC Applicable Requirement
Lignite-fired boiler (Unit 2)	2	2	PM	0.10 lb/10^6 Btu [B] & 528 lb/hr [C]	33.1-15-12, Subpart D, 33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			PM (filterable)	0.03 lb/10^6 Btu [D]	33.1-15-22-03, Subpart 5U
			SO_2	1.2 lb/10^6 Btu [B], 0.15 lb/10^6 Btu [E] (See Cond. 3.B) & 6,336 lb/hr [C]	33.1-15-12, Subpart D, ACP-17249 v1.0 & PTC 4/11/75
			NO_x	5,104 lb/hr [F]	33.1-15-14-06.5.b(1)
			HCl	0.002 lb/10^6 Btu [D] or SO_2 Surrogate: 0.2 lb/10^6 Btu [D]	33.1-15-22-03, Subpart 5U
			Hg	4.0 lb/10^{12} Btu [D]	33.1-15-22-03, Subpart 5U
			Opacity	20% [G]	33.1-15-03-02 & 33.1-15-12, Subpart D
Auxiliary boiler No. 91	3	3	PM	0.41 lb/10^6 Btu & 4.5 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			SO_2	3.0 lb/10^6 Btu & 516 lb/hr [C]	33.1-15-06 & 33.1-15-14-06.5.b(1)
			NO_x	0.7 lb/10^6 Btu	33.1-15-14-06.5.b(1)
			Opacity	20% [H]	33.1-15-03-02
			Annual Capacity	See Cond. 2.D.2)a	33.1-15-22-03, Subpart 5D
Auxiliary boiler No. 92	4	3	PM	0.41 lb/10^6 Btu & 4.5 lb/hr	33.1-15-03-02 & 33.1-15-14-06.5.b(1)
			SO_2	3.0 lb/10^6 Btu & 516 lb/hr [C]	33.1-15-06 & 33.1-15-14-06.5.b(1)
			NO_x	0.7 lb/10^6 Btu	33.1-15-14-06.5.b(1)
			Opacity	20% [H]	33.1-15-03-02
			Annual Capacity	See Cond. 2.D.2)a	33.1-15-22-03, Subpart 5D

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit [A]	NDAC Applicable Requirement
Emergency engine generator 91	5	5	Opacity	20% [H]	33.1-15-03-02
			Operating Hours	See Cond. 1.A, Footnote A	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Emergency fire pump engine	6	6	Opacity	20% [H]	33.1-15-03-02
			Operating Hours	See Cond. 1.A, Footnote A	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Lignite transfer house	7	7	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Lignite emergency reclaim system	8	8	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Lignite yard storage silos	9	9	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Lignite yard storage silos	10	10	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Crusher building (two crushers)	11	11	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Generation building coal hopper	12	12	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Base of Falkirk Mining Company mine silo	13	13	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit [A]	NDAC Applicable Requirement
Generation building coal hopper	14	14	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Generation building coal hopper	15	15	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Generation building coal hopper	16	16	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Generation building coal hopper	17	17	PM	3 lb/hr	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	<20% [I]	33.1-15-03-02 & 33.1-15-12, Subpart Y
Fly ash silo	20	20a, 20b, 20c	PM	3 lb/hr [J]	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	20% [H, J]	33.1-15-03-02
Fly ash silo	21	21a, 21b, 21c	PM	3 lb/hr [J]	33.1-15-05-02 & 33.1-15-14-06.5.b(1)
			Opacity	20% [H, J]	33.1-15-03-02
Fly ash railroad marketing silo	25	25a, 25b	PM	3 lb/hr [J]	33.1-15-14-06.5.b(1)
			Opacity	20% [H, J]	33.1-15-03-02
Fly ash dome	26	26a, 26b, 26c, 26d	PM	0.4 lb/hr [K]	PTC01016
			Opacity	20% [H, J]	33.1-15-03-02
Coal dryer 26	27	27	PM	3.1 lb/hr	PTC04006
CD26 coal crusher	27a		Opacity	20% [H]	33.1-15-03-02
Coal dryer crusher building	28	36	PM/PM_{10}	0.004 gr/dscf & 0.75 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit [A]	NDAC Applicable Requirement
Coal dryer transfer tower	29	37	PM/PM_{10}	0.004 gr/dscf & 0.59 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Auxiliary boiler area	30	38	PM/PM_{10}	0.004 gr/dscf & 0.90 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Coal dryer 11	31	39	PM/PM_{10}	0.004 gr/dscf & 5.3 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
Coal dryer 12	32				
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Coal dryer 13	33	40	PM/PM_{10}	0.004 gr/dscf & 5.3 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
Coal dryer 14	34				
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Coal dryer 21	35	41	PM	7.0 lb.hr	ACP-17130 v1.0 & 33.1-15-14-03.6
Coal dryer 22	36				
			Opacity	20% [H]	33.1-15-03-02
Coal dryer 23	37	42	PM	7.0 lb.hr	ACP-17130 v1.0 & 33.1-15-14-03.6
Coal dryer 24	38				
			Opacity	20% [H]	33.1-15-03-02
Air jig 21	39a	43	PM/PM_{10}	0.004 gr/dscf & 1.4 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
Air jig 22	39b				
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Lignite rail loading silo	40	44	PM/PM_{10}	0.004 gr/dscf & 0.08 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Lignite dust collector 98	41	45	PM/PM_{10}	0.004 gr/dscf & 0.13 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Lignite rail loading surge hopper 91	42	46	PM/PM_{10}	0.004 gr/dscf & 0.08 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit [A]	NDAC Applicable Requirement
Lignite dust collector 99	43	47	PM/PM_{10}	0.004 gr/dscf & 0.75 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Fluidized bed pilot dryer	45	49	PM/PM_{10}	0.005 gr/dscf & 0.30 lb/hr [L]	ACP-17132 v1.0 (BACT) & 33.1-15-02-07
			Opacity	10% (6-min. avg.)	ACP-17132 v1.0 (BACT)
Emergency engine generator 92	46	50	Opacity	20% [H]	33.1-15-03-02
			Operating Hours	See Cond.1.A, Footnote A	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Air jig rejects silo 92	47	51	PM	0.010 gr/dscf	33.1-15-12, Subpart Y
			Opacity	<10%	33.1-15-12, Subpart Y
Air jig rejects loadout Spout 92	48	52	PM	0.010 gr/dscf	33.1-15-12, Subpart Y
			Opacity	<10%	33.1-15-12, Subpart Y
Air jig rejects conveyor 921	49	53	PM	0.010 gr/dscf	33.1-15-12, Subpart Y
			Opacity	<10%	33.1-15-12, Subpart Y
Air jig rejects conveyor 922	50	54	PM	0.010 gr/dscf	33.1-15-12, Subpart Y
			Opacity	<10%	33.1-15-12, Subpart Y

A Emission limits are based on a 1-hour average, unless otherwise noted.
B This standard does not apply during startup, shutdown and malfunction.
C 3-hr rolling average
D 30-boiler operating day rolling average; emissions from both units (EU 1 and EU 2) may be averaged.
E 30-day rolling average; emissions from both units (EU 1 and EU 2) may be averaged.
F 12-month rolling average
G 27% opacity (six-minute average) is permissible for not more than one six-minute period per hour; this standard does not apply during startup, shutdown and malfunction. During startup shutdown and malfunction, 20% opacity, except that a maximum of 40% opacity (six-minute average) is permissible for not more than one six-minute period per hour.
H 40% opacity (six-minute average) is permissible for not more than one six-minute period per hour; this standard applies at all times.
I This standard does not apply during startup, shutdown and malfunction. During startup shutdown and malfunction, 20% opacity, except that a maximum of 40% opacity (six-minute average) is permissible for not more than one six-minute period per hour.
J Emission limit applies to each emission point.
K Emission limit applies to the total of the emission points (EP 26a through 26d).
L Most stringent limit applies.

B. **EU 1 and EU 2**: The term "30-day rolling average," as used in this permit, shall be determined by calculating an arithmetic average of all hourly rates for the current boiler operating day and the previous 29 boiler operating days. A new 30-day rolling average shall be calculated for each boiler operating day. Each 30-day rolling average rate shall include start-up, shutdown, emergency and malfunction periods unless those periods are exempt by this permit. The 30-day rolling average emission rate is calculated as follows:

- Calculate the hourly average emission rate for any hour in which any fuel is combusted in the boiler.

- Calculate the 30-day rolling average emission rate as the arithmetic average of all valid hourly average emission rates for the 30 successive boiler operating days.

The term "boiler operating day," as used in this permit, means any twenty-four-hour period between midnight and the following midnight during which any fuel is combusted at any time at the steam generating unit.

1) Unit 1 and Unit 2 shall not discharge or cause the discharge of sulfur dioxide (SO_2) into the atmosphere in excess of either:

   a) 0.15 pounds per million British thermal units ($lb/10^6$ Btu) of heat input on a 30-day rolling average basis; or as an alternative

   b) 5.0% of the SO_2 reaching the inlet of the scrubber (95.0% reduction) on a 30-day rolling average basis.

   For determining compliance with the above emission limits, the permittee may average emissions from Unit 1 and Unit 2 provided the average does not exceed 0.15 $lb/10^6$ Btu; or 5.0 percent (95.0% reduction) of the SO_2 reaching the inlet of the scrubbing system(s), as appropriate.

Applicable Requirement: ACP-17249 v1.0

C. **Opacity Limit for Fugitive Emissions**: The permittee shall not discharge into the ambient air any air contaminant which exhibits an opacity great than 40% for more than one six-minute period per hour. Such visible emissions shall have been visibly transported off the property of emission origination and remains visible to an observer positioned off said property when sighting along a line which does not cross the property of emission origination.

Applicable Requirement: NDAC 33.1-15-03-03

4. **Monitoring Requirements and Conditions:**

A. **Requirements:**

Emission Unit Description	EU	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Lignite-fired boiler (Unit 1)	1	PM/ PM (filterable)	O&M/Compliance Assurance Monitoring (CAM)/Emissions Test	4.B.1, 4.B.7, 4.B.8 & 4.B.13	PTC 4/11/75, 33.1-15-14-06.10 & 33.1-15-22-03, Subpart 5U
		SO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7 & 4.B.15	33.1-15-12, Subpart D, PTC 4/11/75, 33.1-15-21 & ACP-17249 v1.0
		NO_x	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, & 4.B.7	PTC 4/11/75 & 33.1-15-21
		NO_x & CO	Tune-up	4.B.6	33.1-15-22-03, Subpart 5U
		CO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, & 4.B.7	33.1-15-12, Subpart D, 33.1-15-21 & ACP-17249 v1.0
		HCl	O&M/Emissions Test or SO_2 CEMS	4.B.1, 4.B.7 & 4.B.18	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5U
		Hg	O&M/Emissions Test or Hg CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7 & 4.B.15	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5U
		Opacity	O&M/COMS	4.B.1, 4.B.2, 4.B.3, 4.B.4 & 4.B.7	33.1-15-14-06.5.a(3)(a), 33.1-15-12, Subpart D, PTC 4/11/75 & 33.1-15-21
		Flow	Flow Monitor	4.B.1, 4.B.3 & 4.B.4	33.1-15-21 & ACP-17249 v1.0

Emission Unit Description	EU	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Lignite-fired boiler (Unit 2)	2	PM/ PM (filterable)	O&M/CAM/ Emissions Test	4.B.1, 4.B.7, 4.B.8 & 4.B.13	PTC 4/11/75, 33.1-15-14-06.10 & 33.1-15-22-03, Subpart 5U
		SO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7 & 4.B.15	33.1-15-12, Subpart D, PTC 4/11/75, 33.1-15-21 & ACP-17249 v1.0
		NO_x	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, & 4.B.7	PTC 4/11/75 & 33.1-15-21
		NO_x & CO	Tune-up	4.B.6	33.1-15-22-03, Subpart 5U
		CO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, & 4.B.7	33.1-15-12, Subpart D, 33.1-15-21 & ACP-17249 v1.0
		HCl	O&M/Emissions Test or SO_2 CEMS	4.B.1, 4.B.7 & 4.B.18	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5U
		Hg	O&M/Emissions Test or Hg CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7 & 4.B. 15	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5U
		Opacity	O&M/COMS	4.B.1, 4.B.2, 4.B.3, 4.B.4 & 4.B.7	33.1-15-14-06.5.a(3)(a), 33.1-15-12, Subpart D, PTC 4/11/75 & 33.1-15-21
		Flow	Flow Monitor	4.B.1, 4.B.3 & 4.B.4	33.1-15-21 & ACP-17249 v1.0
Auxiliary boiler No. 91	3	PM/Opacity	Recordkeeping/ Tune-up	4.B.5 & 4.B.9	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5D
		SO_2	Sulfur Analysis	4.B.11	33.1-15-14-06.5.a(3)(a)
		NO_x/HAP	Tune-up	4.B.9	33.1-15-22-03, Subpart 5D
		Annual Capacity Factor	Recordkeeping	4.B.14	33.1-15-22-03, Subpart 5D & 33.1-15-14-06.5.a(3)(a)

Emission Unit Description	EU	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Auxiliary boiler No. 92	4	PM/Opacity	Recordkeeping/ Tune-up	4.B.5 & 4.B.9	33.1-15-14-06.5.a(3)(a) & 33.1-15-22-03, Subpart 5D
		SO_2	Sulfur Analysis	4.B.11	33.1-15-14-06.5.a(3)(a)
		NO_x/HAP	Tune-up	4.B.9	33.1-15-22-03, Subpart 5D
		Annual Capacity Factor	Recordkeeping	4.B.14	33.1-15-22-03, Subpart 5D & 33.1-15-14-06.5.a(3)(a)
Emergency engine generator 91	5	Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		Operating Hours	Recordkeeping	1.A, Footnote A & 4.B.12	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Emergency fire pump engine	6	Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		Operating Hours	Recordkeeping	1.A, Footnote A & 4.B.12	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Lignite transfer house	7	PM/Opacity	O&M/VE Observations (VEO)	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite emergency reclaim system	8	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite yard storage silos	9	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite yard storage silos	10	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Crusher building (two crushers)	11	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Generation building coal hopper	12	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Base of Falkirk Mining Company mine silo	13	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Generation building coal hopper	14	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Generation building coal hopper	15	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Generation building coal hopper	16	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Generation building coal hopper	17	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Fly ash silo	20	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)

Emission Unit Description	EU	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Fly ash silo	21	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Fly ash railroad marketing silo	25	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Fly ash dome	26	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 26	27	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
CD26 coal crusher	27a				
Coal dryer crusher building	28	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer transfer tower	29	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Auxiliary boiler area	30	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 11	31	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 12	32				
Coal dryer 13	33	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 14	34				
Coal dryer 21	35	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 22	36				
Coal dryer 23	37	PM/Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Coal dryer 24	38				
Air jig 21	39a	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Air jig 22	39b				
Lignite rail loading silo	40	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite dust collector 98	41	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite rail loading surge hopper 91	42	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Lignite dust collector 99	43	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Fluidized bed pilot dryer	45	PM/PM_{10}/ Opacity	O&M/VEO	4.B.7 & 4.B.10	33.1-15-14-06.5.a(3)(a)
Emergency engine generator 92	46	Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		Operating Hours	Recordkeeping	1.A, Footnote A & 4.B.12	33.1-15-12, Subpart 4I & 33.1-15-22, Subpart 4Z
Air jig rejects silo 92	47	PM	Emissions Test	4.B.17	ACP-17754 v1.0 & 33.1-15-12-03, Subpart Y
		Opacity	O&M/VEO	4.B.7 & 4.B.16	ACP-17754 v1.0, 33.1-15-14-06.5.a(3)(a) & 33.1-15-12-03, Subpart Y

Emission Unit Description	EU	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Air jig rejects loadout spout 92	48	PM	Emissions Test	4.B.17	ACP-17754 v1.0 & 33.1-15-12-03, Subpart Y
		Opacity	O&M/VEO	4.B.7 & 4.B.16	ACP-17754 v1.0, 33.1-15-14-06.5.a(3)(a) & 33.1-15-12-03, Subpart Y
Air jig rejects conveyor 921	49	PM	Emissions Test	4.B.17	ACP-17754 v1.0 & 33.1-15-12-03, Subpart Y
		Opacity	O&M/VEO	4.B.7 & 4.B.16	ACP-17754 v1.0, 33.1-15-14-06.5.a(3)(a) & 33.1-15-12-03, Subpart Y
Air jig rejects conveyor 922	50	PM	Emissions Test	4.B.17	ACP-17754 v1.0 & 33.1-15-12-03, Subpart Y
		Opacity	O&M/VEO	4.B.7 & 4.B.16	ACP-17754 v1.0, 33.1-15-14-06.5.a(3)(a) & 33.1-15-12-03, Subpart Y

B. **Emission Monitoring Conditions**:

1) The monitoring shall be in accordance with the following requirements of the North Dakota Air Pollution Control Rules (NDAC) 33.1-15-06, 33.1-15-12, 33.1-15-21 and 33.1-15-22, as applicable. Emissions are calculated using 40 CFR 75, Appendix F and 40 CFR 60, Appendix A.

a) NDAC 33.1-15-06-04, Monitoring Requirements

b) NDAC 33.1-15-12-02, Subpart A, §60.13, Monitoring Requirements

c) NDAC 33.1-15-12-02, Subpart D, §60.45, Emission and Fuel Monitoring

d) NDAC 33.1-15-21, Monitoring Requirements

e) NDAC 33.1-15-22-03, Subpart UUUUU, §63.10020, Continuous Compliance Requirements

2) The permittee shall conduct performance evaluations of the continuous opacity monitoring system with quarterly performance audits and annual zero alignments in accordance with 40 CFR 60 Appendix F, Procedure 3.

a) Conformance with the specification for calibration error, Section 13.3 Field Audit Performance Specifications, Paragraph (2) Calibration Error of 40 CFR 60, Appendix B, Performance Specification 1 must be demonstrated.

b) Quarterly assessments may be reduced in frequency to semi-annual with four consecutive quarters of quality-assured data (40 CFR 60 Appendix F, Procedure 3, Section 2.0).

1] The requirements of 40 CFR 60, Appendix F, Procedure 3 include daily calibration checks, quarterly performance audits and annual primary zero alignment under clear path conditions.

2] The procedures of Section 8.1, paragraph (3)(ii) Calibration Check of 40 CFR 60, Appendix B, Performance Specification 1 shall be used to determine conformance with the specification for calibration error.

3) The Department may require additional performance audits of the CEMS.

4) When a failure of a continuous emission monitoring system occurs, an alternative method, acceptable to the Department, for measuring or estimating emissions must be undertaken as soon as possible. The procedures outlined in 40 CFR 75, Subpart D for substitution are considered an acceptable method. Timely repair of the emission monitoring system must be made.

5) For purposes of compliance monitoring, burning of fuel outlined in Conditions 2.A.1, 2.A.2 and 2.A.3 shall be considered credible evidence of compliance with any applicable opacity, particulate and SO_2 emission limit. However, results from tests conducted in accordance with the test methods in 40 CFR 50, 51, 60, 61, or 75 will take precedence over burning fuel as outlined in Conditions 2.A.1, 2.A.2 and 2.A.3 for evidence of compliance or noncompliance with any applicable opacity, particulate and SO_2 emission limit, in the event of enforcement action.

6) Conduct a tune-up on each existing coal-fired boiler at least each 36 calendar months, or each 48 calendar months if neural network combustion optimization software is employed, in accordance with 40 CFR 63, Subpart UUUUU.

7) The permittee shall maintain and operate emission sources and air pollution control equipment in a manner consistent with good air pollution control practice for maintaining continuous compliance. The manufacturer's recommended Operations and Maintenance (O&M) procedures, or a site-specific O&M procedure (developed from the manufacturer's recommended O&M procedures), shall be followed to assure proper operation and maintenance of the equipment. The permittee shall have the O&M procedures available on-site and provide the Department with a copy when requested.

8) a) Within two years of issuance of the renewal permit, the permittee shall conduct an emissions test to measure particulate emissions, using EPA Test Methods in 40 CFR 60, Appendix A or 40 CFR 63, Subpart UUUUU. A test shall consist of three

runs, with each run at least one hour in length. Other tests may be used provided they are approved, in advance, by the Department.

Note: This requirement may be satisfied if recurring testing is otherwise performed in accordance with requirements under 40 CFR 63, Subpart UUUUU (including LEE emissions testing; see Condition 4.B.8.b).

b) Conduct particulate emissions performance tests quarterly for units subject to 40 CFR 63, Subpart UUUUU. If the permittee maintains Low-Emitting EGU (LEE) status for PM under 40 CFR 63, Subpart UUUUU, the particulate emissions test schedule may be modified to every three years.

9) Complete a boiler tune-up once every five years as specified in §63.7540 of 40 CFR 63, Subpart DDDDD.

10) At least once per week in which the emission unit is operated, a company representative who is certified or has received Department approved visible emissions training (requires a one-time visible emissions lecture session, plus one-hour visible emissions field training; need not be certified) shall observe the emission point. If no visible emissions are present, the permittee shall record the date, time and observation results. If the observation indicates visible emissions are present:

a) The permittee must investigate for a potential problem within eight hours. Any problems that are discovered must be corrected as soon as possible. If the correction of the situation is expected to take longer than 24 hours, the permittee shall follow procedures as outlined in Condition 7.G. All instances of visible emissions observed, associated investigations of malfunctions, and corrective actions taken shall be recorded.

1] Following corrective maintenance, a visible emissions observation shall be made. If no visible emissions are observed, the date and time shall be recorded. If visible emissions are observed, a formal visible emissions evaluation shall be conducted in accordance with Condition 4.B.10)b.

b) If visible emissions are observed for longer than 24 hours, the permittee shall conduct a formal visible emissions evaluation of the emission point to determine if the emissions are in compliance with the applicable opacity standard. Opacity reading shall consist of three consecutive six-minute periods per day of visible emissions using EPA Reference Method 9 and conducted by a certified visible emissions reader.

c) All investigations of malfunctions and visible emissions shall be recorded. The permittee shall comply with the visible emissions and particulate emission limits and nothing in this condition shall be construed as authorizing otherwise.

11) The sulfur analysis for the fuel may be conducted by the permitted or by the source where the fuel is purchased. The permittee shall calculate sulfur dioxide emission rates from the sulfur content of the fuel using EPA emission factors or other methods approved by the Department.

12) A log shall be kept of the total hours of operation on a calendar year basis for each of the units. For the emergency engine, records shall be maintained to differentiate between time operated for emergency purposes, maintenance/testing purposes, and other nonemergency purposes.

a) For certified engines, the permittee shall collect operational and maintenance data to demonstrate that the facility complies with the engine manufacturer's emission related written instructions [40 CFR 60.4211(a)].

13) The permittee shall conduct the monitoring, recordkeeping and reporting as required by the applicable subparts of 40 CFR 64. Monitoring shall be conducted in accordance with the Compliance Assurance Monitoring (CAM) Plan in Attachment A of this permit. The indicator ranges for emission units subject to CAM are as follows:

Emission Unit Number (Control)	Indicator Monitored (Emission Monitored)	Range
1 (ESP)	Opacity (Particulate Matter)	≤ 20%
2 (ESP)	Opacity (Particulate Matter)	≤ 20%

14) The permittee shall monitor and record the type and amount of fuel used by the Auxiliary Boilers (EU 3 and EU 4).

a) By the 15th day of each January, the permittee shall calculate and record for each limited use boiler the annual capacity factor as defined in §63.7575.

1] These records shall be retained by the permittee for a period of five years and made available to the Department upon request.

2] If the annual capacity factor exceeds 10 percent, the permittee shall notify the Department within 15 days after making the calculation.

15) When averaging the emissions of Unit 1 and Unit 2, compliance shall be determined in accordance with the following:

$$\text{Average ER} = \frac{[(AER_1)(HI_1)+(AER_2)(HI_2)]}{(HI_1 + HI_2)}$$

$$\text{Average ER} = \frac{[(ER_1)(HI_1)+(ER_2)(HI_2)]}{(HI_1 + HI_2)}$$

Average ER = Average Actual Emission Rate
AER_1 = Average Actual Emission Rate of EU Unit 1
AER_2 = Average Actual Emission Rate of EU Unit 2
ER_1 = Actual Emission Rate (lb/10^6 Btu or % Reduction) of EU Unit 1
ER_2 = Actual Emission Rate (lb/10^6 Btu or % Reduction) of EU Unit 2
HI_1 = Actual Heat Input (10^6 Btu) of EU Unit 1
HI_2 = Actual Heat Input (10^6 Btu) of EU Unit 2

Notes:
- ER and HI are 30-day rolling averages.
- 30-day rolling average for the 30 successive boiler operating days as defined in Condition 3.B.
- % Reduction can be on either a lb/10^6 Btu, ppmvd @ 3% O_2, or pounds of SO_2 basis.

16) Following the initial opacity performance test, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of 40 CFR 60, Subpart Y, §60.255, as applicable, except as provided for in paragraphs (e) and (f) of the section. The opacity performance tests shall be performed by a visible emissions certified company/permittee representative.

a) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

b) If average opacity readings in the most recent performance test exceed half the applicable opacity limit, the requirements of paragraph (b)(2)(i) of 40 CFR 60, Subpart Y, §60.255 shall be followed.

17) Following the initial emissions test, an owner or operator subject to a PM emission standard and using a control device with a design controlled potential PM emissions rate of 1.0 Mg (1.1 tons) per year or less is exempted from the requirements of paragraphs (b)(1)(i) and (ii) of 40 CFR 60, Subpart Y, §60.255 provided that the owner or operator meets all of the conditions specified in paragraphs (d)(1) through (3) of §60.255, which are:

a) PM emissions, as determined by the most recent performance test, are less than or equal to the applicable limit;

b) The control device manufacturer's recommended maintenance procedures are followed; and

c) All 6-minute average opacity readings from the most recent performance test are equal to or less than half the applicable opacity limit or the monitoring requirements in paragraphs (e) or (f) of §60.255 are followed.

If any one condition or a combination of the conditions is not met, the requirements of paragraphs (b)(1)(i) and (ii) of 40 CFR 60, Subpart Y, §60.255 shall be followed.

18) If not using SO_2 as a surrogate to demonstrate compliance with HCl limits, conduct HCl performance tests quarterly for unit's subject to 40 CFR 63, Subpart UUUUU. Provided that the permittee maintains LEE status for HCl under 40 CFR 63, Subpart UUUUU, the HCl stack tests required to satisfy LEE status are sufficient to demonstrate compliance with the permit requirements.

5. **Recordkeeping Requirements**:

A. The permittee shall maintain compliance monitoring records as outlined in the Monitoring Records table that include the following information.

1) The date, place (as defined in the permit) and time of sampling or measurement.

2) The date(s) testing was performed.

3) The company, entity, or person that performed the testing.

4) The testing techniques or methods used.

5) The results of such testing.

6) The operating conditions that existed at the time of sampling or measurement.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(3)(b)[1]

7) The records of quality assurance for emissions measuring systems including but not limited to quality control activities, audits and calibration drifts as required by the applicable test method.

8) A copy of all field data sheets from the emissions testing.

9) A record shall be kept of all maintenance conducted on the emission units or air pollution control equipment.

10) Records shall be kept as to the type of fuel usage.

Applicable Requirement: ACP-17249 v1.0

Monitoring Records

Emission Unit Description	EU	Pollutant/ Parameter	Compliance Monitoring Record
Lignite-fired boiler (Unit 1)	1	PM/PM (filterable)	CAM Data & Emissions Test Data
		SO_2 (lb/10^6 Btu)	O&M & CEMS Data
		SO_2 (lb/hr)	O&M, CEMS & Material Balance Data
		NO_x & CO	O&M, CEMS & Tune-up Records Data
		CO_2	O&M & CEMS Data
		HCl	O&M Data & CEMS or Emissions Test Data
		Hg	O&M Data & CEMS or Emissions Test Data
		Opacity	O&M & COMS Data
		Flow	Flow Monitor Data
Lignite-fired boiler (Unit 2)	2	PM/PM (filterable)	CAM Data & Emissions Test Data
		SO_2 (lb/10^6 Btu)	O&M & CEMS Data
		SO_2 (lb/hr)	O&M, CEMS & Material Balance Data
		NO_x & CO	O&M, CEMS & Tune-up Records Data
		CO_2	O&M & CEMS Data
		HCl	O&M Data & CEMS or Emissions Test Data
		Hg	O&M Data & CEMS or Emissions Test Data
		Opacity	O&M & COMS Data
		Flow	Flow Monitor Data

Emission Unit Description	EU	Pollutant/ Parameter	Compliance Monitoring Record
Auxiliary Boiler No. 91	3	PM/Opacity	Type of Fuel Usage & Tune-up Records
		SO_2	Sulfur Analysis
		NO_x	Emissions Test Data or Tune-up Records
		HAP	Tune-up Records
		Annual Capacity Factor	Fuel Records & Calculations
Auxiliary Boiler No. 92	4	PM/Opacity	Type of Fuel Usage & Tune-up Records
		SO_2	Sulfur Analysis
		NO_x	Emissions Test Data or Tune-up Records
		HAP	Tune-up Records
		Annual Capacity Factor	Fuel Records & Calculations
Emergency generator engine 91	5	Opacity	Type of Fuel Usage
		Operating Hours	Hours of Operation Data
Emergency fire pump engine	6	Opacity	Type of Fuel Usage
		Operating Hours	Hours of Operation Data
Lignite transfer house	7	PM/Opacity	O&M & VEO Data
Lignite emergency reclaim system	8	PM/Opacity	O&M & VEO Data
Lignite yard storage silos	9	PM/Opacity	O&M & VEO Data
Lignite yard storage silos	10	PM/Opacity	O&M & VEO Data
Crusher building (two crushers)	11	PM/Opacity	O&M & VEO Data
Generation building coal hopper	12	PM/Opacity	O&M & VEO Data
Base of Falkirk Mining Company mine silo	13	PM/Opacity	O&M & VEO Data
Generation building coal hopper	14	PM/Opacity	O&M & VEO Data
Generation building coal hopper	15	PM/Opacity	O&M & VEO Data
Generation building coal hopper	16	PM/Opacity	O&M & VEO Data
Generation building coal hopper	17	PM/Opacity	O&M & VEO Data
Fly ash silo	20	PM/Opacity	O&M & VEO Data
Fly ash silo	21	PM/Opacity	O&M & VEO Data
Fly ash railroad marketing silo	25	PM/Opacity	O&M & VEO Data

Emission Unit Description	EU	Pollutant/ Parameter	Compliance Monitoring Record
Fly ash dome	26	PM/Opacity	O&M & VEO Data
Coal dryer	27	PM/Opacity	O&M & VEO Data
CD26 coal crusher	27a		
Coal dryer crusher building	28	PM/PM_{10}/Opacity	O&M & VEO Data
Coal dryer transfer tower	29	PM/PM_{10}/Opacity	O&M & VEO Data
Auxiliary boiler area	30	PM/PM_{10}/Opacity	O&M & VEO Data
Coal dryer 11	31	PM/PM_{10}/Opacity	O&M & VEO Data
Coal dryer 12	32		
Coal dryer 13	33	PM/PM_{10}/Opacity	O&M & VEO Data
Coal dryer 14	34		
Coal dryer 21	35	PM/Opacity	O&M & VEO Data
Coal dryer 22	36		
Coal dryer 23	37	PM/Opacity	O&M & VEO Data
Coal dryer 24	38		
Air jig 21	39a	PM/PM_{10}/Opacity	O&M & VEO Data
Air jig 22	39b		
Lignite rail loading silo	40	PM/PM_{10}/Opacity	O&M & VEO Data
Lignite dust collector 98	41	PM/PM_{10}/Opacity	O&M & VEO Data
Lignite rail loading surge hopper 91	42	PM/PM_{10}/Opacity	O&M & VEO Data
Lignite dust collector 99	43	PM/PM_{10}/Opacity	O&M & VEO Data
Fluidized bed pilot dryer	45	PM/PM_{10}/Opacity	O&M & VEO Data
Emergency Engine Generator 92	46	Opacity Operating Hours	Type of Fuel Usage Hours of Operation Data
Air Jig Rejects Silo 92	47	PM/Opacity	Emissions Test, O&M & VEO Data
Air Jig Rejects Loadout Spout 92	48	PM/Opacity	Emissions Test, O&M & VEO Data
Air Jig Rejects Conveyor 921	49	PM/Opacity	Emissions Test, O&M & VEO Data
Air Jig Rejects Conveyor 922	50	PM/Opacity	Emissions Test, O&M & VEO Data

B. In addition to requirements outlined in Condition 5.A, recordkeeping for EU 1, EU 2, EU 7 through EU 17 and EU 47 through EU 50 shall be in accordance with the following requirements of NDAC 33.1-15-06, 33.1-15-12, 33.1-15-14, 33.1-15-21 and 33.1-15-22, as applicable:

1) NDAC 33.1-15-06-05, Reporting and Recordkeeping Requirements

2) NDAC 33.1-15-12, Subpart A, §60.7, Notification and Recordkeeping and Subpart Y, §60.258, Reporting and Recordkeeping

3) NDAC 33.1-15-14-06.10, §64.9 - Reporting and Recordkeeping Requirements, Paragraph (b) General Recordkeeping Requirements

4) NDAC 33.1-15-21 - Recordkeeping Requirements

5) NDAC 33.1-15-22, Subpart UUUUU, §63.10032 and §63.10033, Notification, Reports and Records

Applicable Requirements: NDAC 33.1-15-06, NDAC 33.1-15-12, NDAC 33.1-15-21, NDAC 33.1-15-22

C. Recordkeeping for EU 3 and 4 (auxiliary boilers) shall be in accordance with 40 CFR 63, Subpart DDDDD, §63.7555 and §63.7560, Notification, Reports and Records.

Applicable Requirement: NDAC 33.1-15-22, Subpart DDDDD

D. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings/computer printouts of continuous monitoring instrumentation, and copies of all reports required by the permit.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(3)(b)[2]

6. **Reporting**:

A. Reporting for EU 1, EU 2, EU 7 through EU 17 and EU 47 through EU 50 shall be in accordance with the following requirements of NDAC 33.1-15-06, 33.1-15-12, 33.1-15-14, 33.1-15-21 and 33.1-15-22, as applicable:

1) NDAC 33.1-15-06-05, Reporting and Recordkeeping Requirements

2) NDAC 33.1-15-12, Subpart A, §60.7, Notification and Recordkeeping and Subpart Y, §60.258, Reporting and Recordkeeping

3) NDAC 33.1-15-14-06.10, §64.9 - Reporting and Recordkeeping Requirements, Paragraph (a) General Reporting Requirements

4) NDAC 33.1-15-21, Reporting and Recordkeeping Requirements

5) NDAC 33.1-15-22, Subpart UUUUU, §63.10030 and §63.10031, Notification, Reports and Records

6) NDAC 33.1-15-21-09, Subpart F, Reporting Requirements

7) Quarterly excess emissions reports for EU 1 and EU 2 shall be submitted by the 30th day following the end of each calendar quarter. Excess emissions are defined as emissions which exceed the emission limits for EU 1 and EU 2 as outlined in Condition 3.

a) Excess emissions shall be reported for the following:

Parameter	Reporting Period
SO_2 lb/10^6 Btu	3-hour rolling average
SO_2 lb/10^6 Btu or percent reduction	30-day rolling average
SO_2 lb/hr	3-hour rolling average
NO_x lb/hr	12-month rolling average
Hg lb/10^{12} Btu	30-boiler operating day average
Opacity %	6-minute average

b) Excess emission reports shall include the magnitude, date(s), and duration of each period of excess emissions, specific identification of each period of excess emissions that occurred during startups, shutdown and malfunctions of the unit, the nature and cause of any malfunction (if known) and corrective action taken or preventative measures applied.

Applicable Requirements: NDAC 33.1-15-06, NDAC 33.1-15-12, NDAC 33.1-15-14, NDAC 33.1-15-21, NDAC 33.1-15-22 and ACP-17249 v1.0

B. For EU 3 and EU 4 (auxiliary boilers), reporting shall be in accordance with 40 CFR 63, Subpart A, §63.10, Recordkeeping and Reporting and 40 CFR 63, Subpart DDDDD, Notification, Reports and Records.

Applicable Requirement: NDAC 33.1-15-22, Subpart DDDDD

C. The permittee shall submit a semi-annual monitoring report for all monitoring records required under Condition 5 in a format provided or approved by the Department. All instances of deviations from the permit must be identified in the report. A monitoring report shall be submitted within 45 days after June 30 and December 31 of each year. Reporting required by NDAC 33.1-15-22-03, Subpart DDDDD (§63.7550) shall be included in this report.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(3)(c)[1] and [2]

D. The permittee shall submit an annual compliance certification report in accordance with NDAC 33.1-15-14-06.5.c(5) within 45 days after December 31 of each year in a format provided or approved by the Department.

Applicable Requirement: NDAC 33.1-15-14-06.5.c(5)

E. For emission units where the method of compliance monitoring is demonstrated by an EPA Test Method or a portable analyzer test, the test report shall be submitted to the Department within 60 days after completion of the test.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(e)

F. The permittee shall submit an annual emission inventory report (AEIR) in a format provided or approved by the Department. This report shall be submitted by March 15 of each year. Insignificant units/activities listed in this permit do not need to be included in the report.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(7) and NDAC 33.1-15-23-04

7. **Facility Wide Operating Conditions**:

A. **Ambient Air Quality Standards**:

1) Particulate and gases. The permittee shall not emit air contaminants in such a manner or amount that would violate the standards of ambient air quality listed in Table 1 of NDAC 33.1-15-02, external to buildings, to which the general public has access.

2) Radioactive substances. The permittee shall not release into the ambient air any radioactive substances exceeding the concentrations specified in NDAC 33.1-10.

3) Other air contaminants. The permittee shall not emit any other air contaminants in concentrations that would be injurious to human health or well-being or unreasonably interfere with the enjoyment of property or that would injure plant or animal life.

4) Disclaimer. Nothing in any other part or section of this permit may in any manner be construed as authorizing or legalizing the emission of air contaminants in such manner that would violate the standards in Paragraphs 1), 2) and 3) of this condition.

Applicable Requirements: NDAC 33.1-15-02-04 and 40 CFR 50.1(e)

B. **Fugitive Emissions**: The release of fugitive emissions shall comply with the applicable requirements in NDAC 33.1-15-17.

Applicable Requirement: NDAC 33.1-15-17

C. **Open Burning**: The permittee may not cause, conduct, or permit open burning of refuse, trade waste, or other combustible material, except as provided for in Section 33.1-15-04-02 and may not conduct, cause, or permit the conduct of a salvage operation by open burning. Any permissible open burning under NDAC 33.1-15-04-02 must comply with the requirements of that section.

Applicable Requirement: NDAC 33.1-15-04

D. **Asbestos Renovation or Demolition**: Any asbestos renovation or demolition at the facility shall comply with emission standard for asbestos in NDAC 33.1-15-13.

Applicable Requirement: NDAC 33.1-15-13-02

E. **Requirements for Organic Compounds Gas Disposal**:

1) Any organic compounds, gases and vapors which are generated as wastes as the result of storage, refining or processing operations and which contain hydrogen sulfide shall be incinerated, flared or treated in an equally effective manner before being released into the ambient air.

2) Each flare must be equipped and operated with an automatic ignitor or a continuous burning pilot.

Applicable Requirement: NDAC 33.1-15-07-02

F. **Rotating Pumps and Compressors**: All rotating pumps and compressors handling volatile organic compounds must be equipped and operated with properly maintained seals designed for their specific product service and operating conditions.

Applicable Requirement: NDAC 33.1-15-07-01.5

G. **Shutdowns/Malfunction/Continuous Emission Monitoring System Failure**:

1) Maintenance Shutdowns. In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Department at least 24 hours prior to the planned shutdown provided that the air contaminating source will be operated while the control equipment is not in service. Such prior notice shall include the following:

a) Identification of the specific facility to be taken out of service as well as its location and permit number.

b) The expected length of time that the air pollution control equipment will be out of service.

c) The nature and estimated quantity of emissions of air pollutants likely to be emitted during the shutdown period.

d) Measures, such as the use of off-shift labor and equipment, that will be taken to minimize the length of the shutdown period.

e) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.

f) Nothing in this subsection shall in any manner be construed as authorizing or legalizing the emission of air contaminants in excess of the rate allowed by this article or a permit issued pursuant to this article.

Applicable Requirement: NDAC 33.1-15-01-13.1

2) Malfunctions.

a) When a malfunction in any installation occurs that can be expected to last longer than 24 hours and cause the emission of air contaminants in violation of this article or other applicable rules and regulations, the person responsible for such installation shall notify the Department of such malfunction as soon as possible during normal working hours. The notification must contain a statement giving all pertinent facts, including the estimated duration of the breakdown. The Department shall be notified when the condition causing the malfunction has been corrected.

b) Immediate notification to the Department is required for any malfunction that would threaten health or welfare or pose an imminent danger. During normal working hours the Department can be contacted at 701-328-5188. After hours the Department can be contacted through the 24-hour state radio emergency number 1-800-472-2121. If calling from out of state, the 24-hour number is 701-328-9921.

c) Unavoidable Malfunction. The owner or operator of a source who believes any excess emissions resulted from an unavoidable malfunction shall submit a written report to the Department which includes evidence that:

[1] The excess emissions were caused by a sudden, unavoidable breakdown of technology that was beyond the reasonable control of the owner or operator.

[2] The excess emissions could not have been avoided by better operation and maintenance, did not stem from an activity or event that could have been foreseen and avoided, or planned for.

[3] To the extent practicable, the source maintained and operated the air pollution control equipment and process equipment in a manner consistent with good practice for minimizing emissions, including minimizing any bypass emissions.

[4] Any necessary repairs were made as quickly as practicable, using off-shift labor and overtime as needed and possible.

[5] All practicable steps were taken to minimize the potential impact of the excess emissions on ambient air quality.

[6] The excess emissions are not part of a recurring pattern that may have been caused by inadequate operation or maintenance, or inadequate design of the malfunctioning equipment.

The report shall be submitted within 30 days of the end of the calendar quarter in which the malfunction occurred or within 30 days of a written request by the Department, whichever is sooner.

The burden of proof is on the owner or operator of the source to provide sufficient information to demonstrate that an unavoidable equipment malfunction occurred. The Department may elect not to pursue enforcement action after considering whether excess emissions resulted from an unavoidable equipment malfunction. The Department will evaluate, on a case-by-case basis, the information submitted by the owner or operator to determine whether to pursue enforcement action.

Applicable Requirement: NDAC 33.1-15-01-13.2

3) Continuous Emission Monitoring System Failures. When a failure of a continuous emission monitoring system occurs, an alternative method for measuring or estimating emissions must be undertaken as soon as possible. The owner or operator of a source that uses an alternative method shall have the burden of demonstrating that the method is accurate. Timely repair of the emission monitoring system must be made. The provisions of this subsection do not apply to sources that are subject to monitoring requirements in Chapter 33.1-15-21 (40 CFR 75, Acid Rain Program).

Applicable Requirement: NDAC 33.1-15-01-13.3

H. **Air Pollution from Internal Combustion Engines**: The permittee shall comply with all applicable requirements of NDAC 33.1-15-08-01 – Internal Combustion Engine Emissions Restricted.

Applicable Requirement: NDAC 33.1-15-08-01

I. **Prohibition of Air Pollution**:

1) The permittee shall not permit or cause air pollution, as defined in NDAC 33.1-15-01-04.

2) Nothing in any other part of this permit or any other regulation relating to air pollution shall in any manner be construed as authorizing or legalizing the creation or maintenance of air pollution.

Applicable Requirement: NDAC 33.1-15-01-15

J. **Performance Tests**:

1) The Department may reasonably require the permittee to make or have made tests, at a reasonable time or interval, to determine the emission of air contaminants from any source, for the purpose of determining whether the permittee is in violation of any standard or to satisfy other requirements of NDCC 23.1-06. All tests shall be made, and the results calculated in accordance with test procedures approved or specified by the Department including the North Dakota Department of Environmental Quality Emission Testing Guideline. All tests shall be conducted by reputable, qualified personnel. The Department shall be given a copy of the test results in writing and signed by the person responsible for the tests.

2) The Department may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the permittee shall provide necessary and adequate access into stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants.

Applicable Requirement: NDAC 33.1-15-01-12

3) Except for sources subject to 40 CFR 63, the permittee shall notify the Department by submitting a Proposed Test Plan, or its equivalent, at least 30 calendar days in advance of any tests of emissions of air contaminants required by the Department. The permittee shall notify the Department at least 60 calendar days in advance of any performance testing required under 40 CFR 63, unless otherwise specified by the subpart. If the permittee is unable to conduct the performance test on the scheduled date, the permittee shall notify the Department as soon as practicable when conditions warrant and shall coordinate a new test date with the Department.

Failure to give the proper notification may prevent the Department from observing the test. If the Department is unable to observe the test because of improper notification, the test results may be rejected.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(3)(a), NDAC 33.1-15-12-02 Subpart A (40 CFR 60.8), NDAC 33.1-15-13-01.2 Subpart A (40 CFR 61.13), NDAC 33.1-15-22-03 Subpart A (40 CFR 63.7)

K. **Pesticide Use and Disposal**: Any use of a pesticide or disposal of surplus pesticides and empty pesticide containers shall comply with the requirements in NDAC 33.1-15-10.

Applicable Requirements: NDAC 33.1-15-10-01 and NDAC 33.1-15-10-02

L. **Air Pollution Emergency Episodes**: When an air pollution emergency episode is declared by the Department, the permittee shall comply with the requirements in NDAC 33.1-15-11.

Applicable Requirements: NDAC 33.1-15-11-01 through NDAC 33.1-15-11-04

M. **Stratospheric Ozone Protection**: The permittee shall comply with any applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B:

1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.

2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.

3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

4) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to Section 82.156.

Applicable Requirement: 40 CFR 82

N. **Chemical Accident Prevention**: The permittee shall comply with all applicable requirements of Chemical Accident Prevention pursuant to 40 CFR 68. The permittee shall comply with the requirements of this part no later than the latest of the following dates:

1) Three years after the date on which a regulated substance is first listed under this part; or

2) The date on which a regulated substance is first present above a threshold quantity in a process.

Applicable Requirement: 40 CFR 68

O. **Air Pollution Control Equipment**: The permittee shall maintain and operate air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The manufacturer's recommended Operations and Maintenance (O&M) procedures, or a site-specific O&M procedure developed from the manufacturer's recommended O&M procedures, shall be followed to assure proper operation and maintenance of the equipment. The permittee shall have the O&M procedures available onsite and provide the Department with a copy when requested.

Applicable Requirement: NDAC 33.1-15-14-06.5.b(1)

P. **Prevention of Significant Deterioration of Air Quality** (40 CFR 52.21 as incorporated by NDAC Chapter 33.1-15-15): If this facility is classified as a major stationary source under the Prevention of Significant Deterioration of Air Quality (PSD) rules, a Permit to Construct must be obtained from the Department for any project which meets the definition of a "major modification" under 40 CFR 52.21(b)(2).

If this facility is classified as a major stationary source under the PSD rules and the permittee elects to use the method specified in 40 CFR 52.21(b)(41)(ii)(a) through (c) for calculating the projected actual emissions of a proposed project, then the permittee shall comply with all applicable requirements of 40 CFR 52.21(r)(6).

Applicable Requirement: NDAC 33.1-15-15-01.2

8. **General Conditions**:

A. **Annual Fee Payment**: The permittee shall pay an annual fee, for administering and monitoring compliance, which is determined by the actual annual emissions of regulated contaminants from the previous calendar year. The Department will send a notice, identifying the amount of the annual permit fee, to the permittee of each affected installation. The fee is due within 60 days following the date of such notice. Any source that qualifies as a "small business" may petition the Department to reduce or exempt any fee required under this section. Failure to pay the fee in a timely manner or submit a certification for exemption may cause this Department to initiate action to revoke the permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(7) and NDAC 33.1-15-23-04

B. **Permit Renewal and Expiration**: This permit shall be effective from the date of its issuance for a fixed period of five years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least six months, but no more than 18 months, prior to the date of permit expiration. The Department shall approve or disapprove the renewal application within 60 days of receipt. Unless the Department requests additional information or otherwise notifies the applicant of incompleteness, the application shall be deemed complete. For timely and complete renewal applications for which the Department has failed to issue or deny the renewal permit before the expiration date of the previous permit, all terms and conditions of the permit, including any permit shield previously granted shall remain in effect until the renewal permit has been issued or denied. The application for renewal shall include the current permit number, description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term.

Applicable Requirements: NDAC 33.1-15-14-06.4 and NDAC 33.1-15-14-06.6

C. **Transfer of Ownership or Operation**: This permit may not be transferred except by procedures allowed in Chapter 33.1-15-14 and is to be returned to the Department upon the destruction or change of ownership of the source unit(s), or upon expiration, suspension or revocation of this permit. A change in ownership or operational control of a source is treated as an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Department.

Applicable Requirement: NDAC 33.1-15-14-06.6.d

D. **Property Rights**: This permit does not convey any property rights of any sort, or any exclusive privilege.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(d)

E. **Submissions**:

1) Reports, test data, monitoring data, notifications, and requests for renewal shall be submitted to the Department using a format provided or approved by the Department. Physical submittals shall be submitted to:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324

2) Any application form, report or compliance certification submitted shall be certified as being true, accurate, and complete by a responsible official.

Applicable Requirement: NDAC 33.1-15-14-06.4.d

F. **Right of Entry**: Any duly authorized officer, employee or agent of the North Dakota Department of Environmental Quality may enter and inspect any property, premise or place listed on this permit or where records are kept concerning this permit at any reasonable time for the purpose of ascertaining the state of compliance with this permit and the North Dakota Air Pollution Control Rules. The Department may conduct tests and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect emissions of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department's rules and to inspect monitoring equipment located on the premises.

Applicable Requirements: NDAC 33.1-15-14-06.5.c(2) and NDAC 33.1-15-01-06

G. **Compliance**: The permittee must comply with all conditions of this permit. Any noncompliance with a federally-enforceable permit condition constitutes a violation of the Federal Clean Air Act. Any noncompliance with any State enforceable condition of this permit constitutes a violation of NDCC Chapter 23.1-06 and NDAC 33.1-15. Violation of any condition of this permit is grounds for enforcement action, for permit termination, revocation and reissuance or modification, or for denial of a permit renewal application. Noncompliance may also be grounds for assessment of penalties under the NDCC 23.1-06. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(6)(a) and NDAC 33.1-15-14-06.5.a(6)(b)

H. **Duty to Provide Information**: The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. This includes instances where an alteration, repair, expansion, or change in method of operation of the source occurs. Upon request, the permittee shall also furnish to the

Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such recourse directly to the Department along with a claim of confidentiality. The permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. Items that warrant supplemental information submittal include, but are not limited to, changes in the ambient air boundary and changes in parameters associated with emission points (i.e., stack parameters). The permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(6)(e), NDAC 33.1-15-14-06.6.b(3) and NDAC 33.1-15-14-06.4.b

I. **Reopening for Cause**: The Department will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

1) Additional applicable requirements under the Federal Clean Air Act become applicable to the permittee with a remaining permit term of three or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.

2) The Department or the United States Environmental Protection Agency determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

3) The Department or the United States Environmental Protection Agency determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

4) Reopenings shall not be initiated before a notice of intent to reopen is provided to the permittee by the Department at least 30 days in advance of the date that this permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency. Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

Applicable Requirement: NDAC 33.1-15-14-06.6.f

J. **Permit Changes**: The permit may be modified, revoked, reopened, and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(c)

K. **Off-Permit Changes**: A permit revision is not required for changes that are not addressed or prohibited by this permit, provided the following conditions are met:

1) No such change may violate any term or condition of this permit.

2) Each change must comply with all applicable requirements.

3) Changes under this provision may not include changes or activities subject to any requirement under Title IV or that are modifications under any provision of Title I of the Federal Clean Air Act.

4) A Permit to Construct under NDAC 33.1-15-14-02 has been issued, if required.

5) Before the permit change is made, the permittee must provide written notice to both the Department and Air Program (8P-AR), Office of Partnerships & Regulatory Assistance, US EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, except for changes that qualify as insignificant activities in Section 33.1-15-14-06. This notice shall describe each change, the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result.

6) The permittee shall record all changes that result in emissions of any regulated air pollutant subject to any applicable requirement not otherwise regulated under this permit, and the emissions resulting from those changes. The record shall reside at the permittee's facility.

Applicable Requirement: NDAC 33.1-15-14-06.6.b(3)

L. **Administrative Permit Amendments**: This permit may be revised through an administrative permit amendment, if the revision to this permit accomplishes one of the following:

1) Corrects typographical errors.

2) Identifies a change in the name, address or phone number of any person identified in this permit or provides a similar minor administrative change at the source.

3) Requires more frequent monitoring or reporting by the permittee.

4) Allows for a change in ownership or operational control of the source where the Department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the Department.

5) Incorporates into the Title V permit the requirements from a Permit to Construct when the review was substantially equivalent to Title V requirements for permit issuance, renewal, reopenings, revisions and permit review by the United States Environmental Protection Agency and affected state review, that would be applicable to the change if it were subject to review as a permit modification and compliance requirements substantially equivalent to Title V requirements for permit content were contained in the Permit to Construct.

6) Incorporates any other type of change which the Administrator of the United States Environmental Protection Agency has approved as being an administrative permit amendment as part of the Department's approved Title V operating permit program.

Applicable Requirement: NDAC 33.1-15-14-06.6.d

M. **Minor Permit Modification**: This permit may be revised by a minor permit modification, if the proposed permit modification meets the following requirements:

1) Does not violate any applicable requirement.

2) Does not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in this permit.

3) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis.

4) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the Federal Clean Air Act; and alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the Federal Clean Air Act.

5) Is not a modification under NDAC 33.1-15-12, 33.1-15-13, and 33.1-15-15 or any provision of Title I of the Federal Clean Air Act.

6) Is not required to be processed as a significant modification.

Applicable Requirement: NDAC 33.1-15-14-06.6.e(1)

N. **Significant Modifications**:

1) Significant modification procedures shall be used for applications requesting permit modifications that do not qualify as minor permit modifications or as administrative amendments. Every significant change in existing monitoring permit terms or conditions and every relaxation of reporting or recordkeeping permit terms or conditions shall be considered significant. Nothing therein shall be construed to preclude the permittee from making changes consistent with this subsection that would render existing permit compliance terms and conditions irrelevant.

2) Significant permit modifications shall meet all Title V requirements, including those for applications, public participation, review by affected states, and review by the United States Environmental Protection Agency, as they apply to permit issuance and permit

renewal. The Department shall complete review of significant permit modifications within nine months after receipt of a complete application.

Applicable Requirement: NDAC 33.1-15-14-06.6.e(3)

O. **Operational Flexibility**: The permittee is allowed to make a limited class of changes within the permitted facility that contravene the specific terms of this permit without applying for a permit revision, provided the changes do not exceed the emissions allowable under this permit, are not Title I modifications and a Permit to Construct is not required. This class of changes does not include changes that would violate applicable requirements, or changes to federally-enforceable permit terms or conditions that are monitoring, recordkeeping, reporting, or compliance certification requirements.

The permittee is required to send a notice to both the Department and Air Program (8P-AR), Office of Partnerships & Regulatory Assistance, US EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, at least seven days in advance of any change made under this provision. The notice must describe the change, when it will occur and any change in emissions, and identify any permit terms or conditions made inapplicable as a result of the change. The permittee shall attach each notice to its copy of this permit. Any permit shield provided in this permit does not apply to changes made under this provision.

Applicable Requirement: NDAC 33.1-15-14-06.6.b(2)

P. **Relationship to Other Requirements**: Nothing in this permit shall alter or affect the following:

1) The provisions of Section 303 of the Federal Clean Air Act (emergency orders), including the authority of the administrator of the United States Environmental Protection Agency under that section.

2) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

3) The ability of the United States Environmental Protection Agency to obtain information from a source pursuant to Section 114 of the Federal Clean Air Act.

4) Nothing in this permit shall relieve the permittee of the requirement to obtain a Permit to Construct.

Applicable Requirements: NDAC 33.1-15-14-06.3 and NDAC 33.1-15-14-06.5.f(3)(a), (b) and (d)

Q. **Severability Clause**: The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(5)

R. **Circumvention**: The permittee shall not cause or permit the installation or use of any device of any means which conceals or dilutes an emission of air contaminants which would otherwise violate this permit.

Applicable Requirement: NDAC 33.1-15-01-08

9. **Phase II Acid Rain Provisions**:

Affected Source Unit: Coal Creek Station
ORIS Plant Code: 6030
Boiler ID: 1 and 2

This section incorporates the definition of terms in NDAC Chapter 33.1-15-21 by reference effective April 1, 2003.

A. **Permit Requirements**:

1) The designated representative of each affected source and each affected unit at the source shall:

a) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR 72 in accordance with the deadlines specified in NDAC 33.1-15-14-08.1 and 40 CFR 72.30, including application for permit renewal; and

b) Submit in a timely manner any supplemental information that the North Dakota Department of Environmental Quality, Division of Air Quality, determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit.

2) The owners and operators of each affected source and each affected unit at the source shall:

a) Operate the unit in compliance with a complete Acid Rain permit application including any application for permit renewal or a superseding Acid Rain permit issued by the North Dakota Department of Environmental Quality, Division of Air Quality and

b) Have an Acid Rain permit.

Applicable Requirement: NDAC 33.1-15-21-08.1 and NDAC 33.1-15-21-09

B. **Monitoring Requirements**:

1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR 75 and 76.

2) The emissions measurements recorded and reported in accordance with 40 CFR 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and

emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

3) The requirements of 40 CFR 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Federal Clean Air Act and other provisions of the operating permit for the source.

Applicable Requirements: NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09 and 40 CFR 76

C. **Sulfur Dioxide Requirements**:

1) The owners and operators of each source and each affected unit at the source shall:

a) Hold allowances, as of the allowance transfer deadline, in the units compliance subaccount [after deductions under 40 CFR 73.34(c)] not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and

b) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Federal Clean Air Act.

3) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

4) An allowance shall not be deducted in order to comply with the requirements under Condition 9.C.1)a) of this permit prior to the calendar year for which the allowance was allocated.

5) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, this permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

6) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Applicable Requirements: NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09 and 40 CFR 73

D. **Nitrogen Oxides Requirements**:

1) NO_x Emission Limitations: The owner or operator shall not discharge, or allow to be discharged, emissions of NO_x to the atmosphere in excess of the following limits:

Boiler ID	Emission Limitation
1	0.40 lb/10^6 Btu*
2	0.40 lb/10^6 Btu*

*Annual average basis

The owner/operator shall also comply with the duty under 40 CFR 76.9(d) to reapply for an NO_x compliance plan prior to expiration of this permit and requirements under 40 CFR 76.13 for calculating NO_x emissions.

Applicable Requirements: 40 CFR 76.7(a)(1), 76.7(a)(2), 76.8(a)(1), 76.9(d), 76.13 and NDAC 33.1-15-21-10

E. **Excess Emissions Requirements**:

1) The designated representative of an affected unit that has excess emissions of SO_2 in any calendar year shall submit a proposed offset plan, to the Administrator as required under 40 CFR 77, with a copy to the North Dakota Department of Environmental Quality, Division of Air Quality.

2) The owners and operators of an affected unit that has excess emissions of NO_x or SO_2 in any calendar year shall:

a) Pay to the Administrator without demand the penalty required, and pay to the Administrator upon demand the interest on that penalty, as required by 40 CFR 77; and

b) Comply with the terms of an approved offset plan for SO_2, as required by 40 CFR 77.

Applicable Requirement: NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09 and 40 CFR 77

F. **Recordkeeping and Reporting Requirements**:

1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on-site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator of the U.S. EPA or the North Dakota Department of Environmental Quality, Division of Air Quality:

a) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on-site at the source beyond such 5-year period until such documents are superseded because of the

submission of a new certificate of representation changing the designated representative;

b) All emissions monitoring information, in accordance with 40 CFR 75, provided that to the extent that 40 CFR 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;

c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

d) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 72, Subpart I, NDAC 33.1-15-21-08, and 40 CFR 75.

Applicable Requirements: NDAC 33.1-15-21-08.1 and NDAC 33.1-15-21-09

G. **Liability**:

1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, this Acid Rain Permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to Section 113(c) of the Federal Clean Air Act.

2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to Section 113(c) of the Federal Clean Air Act and 18 U.S.C. 1001.

3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated represented of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plan) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated

representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

7) Each violation of a provision of NDAC 33.1-15-21-08.1 through 33.1-15-21-10 and 40 CFR 72, 73, 75, 76 and 77 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Federal Clean Air Act.

Applicable Requirements: NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09, and NDAC 33.1-15-21-10 and 40 CFR 72, 73, 75, 76 and 77

H. **Effect on Other Authorities**: No provision of the Acid Rain Program, an Acid Rain permit application, this Acid Rain permit condition, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

1) Except as expressly provided in Title IV of the Federal Clean Air Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Federal Clean Air Act, including the provisions of Title I of the Federal Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Federal Clean Air Act,

3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Applicable Requirement: NDAC 33.1-15-21-08.1

I. **Permit Shield**: Each affected unit operating in accordance with this permit which is issued in compliance with Title IV of the Federal Clean Air Act, as provided in 40 CFR 72, 73, 75, 77 and 78, and the regulations implementing Section 407 of the Federal Clean Air Act, shall be deemed operating in compliance with the Acid Rain Program, except as provided in 40 CFR 72.9(g)(6). The permit shield does not take effect until the effective date of the acid rain permit.

Applicable Requirements: NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09, and 40 CFR 73, 77 and 78

J. **Reopening for Cause**: In addition to any reasons for reopening for cause previously stated in this permit, the Department will reopen and revise this permit as necessary to remedy deficiencies in the following circumstance: If additional requirements, including excess emissions requirements, become applicable to an affected source under Title IV of the Federal Clean Air Act or the regulations promulgated there under. Upon approval by the administrator of the United States Environmental Protection Agency, excess emissions offset plans shall be deemed to be incorporated into the permit.

Applicable Requirements: NDAC 33.1-15-14-06.6.f(1)(b) and 40 CFR 70.7(f)(1)(ii)

10. **State Enforceable Only Conditions (not Federally enforceable):**

A. **General Odor Restriction**: The permittee shall not discharge into the ambient air any objectionable odorous air contaminant which exceeds the limits established in NDAC 33.1-15-16.

Applicable Requirement: NDAC 33.1-15-16

Attachment A

Compliance Assurance Monitoring (CAM) Plan
(EU 1 and 2)

Attachment A

Compliance Assurance Monitoring (CAM) Protocol for Particulate Mass Emissions

Coal Creek Station
Boilers 1 and 2

Revision Date

January 29, 2024

Review Date

January 29, 2024

Rainbow Energy Center (REC)
918 E. Divide Ave
Bismarck, ND 58504

COMPLIANCE ASSURANCE MONITORING PROTOCOL
ELECTROSTATIC PRECIPITATOR (ESP) AND SPRAY TOWER SCRUBBER FOR PARTICLE MASS EMISSIONS CONTROL

I. Background

A. Emissions Units

Description/ Identification:	Unit 1: 6,015 mmBtu/hr lignite-fired boiler Unit 2: 6,022 mmBtu/hr lignite-fired boiler
Facility:	Coal Creek Station Underwood, ND

B. Applicable Regulation, Emissions Limit, and Monitoring Requirements

Regulations:	NDAC § 33.1-15, New Source Performance Standards
Emissions Limits (both units):	
Particulate Matter (PM):	(1) 0.10 lb/mmBtu [NDAC 33.1-15-12,Subpart D] (2) 528 lb/hr [PTC Condition[1]]
Current Monitoring Requirements:	Continuous Opacity Monitoring (COM) and Periodic compliance testing

C. Control Technologies

(1) Electrostatic precipitator (each unit)
(2) Spray tower scrubber (each unit)

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1. The primary performance indicator is the measured opacity from the continuous opacity monitoring system (COMS) on the stack of each unit. This CAM Plan does not apply to units continuously monitoring particulate emissions.

[1] The PTC "lb/hr" limit is based on estimated boiler heat input and NDAC 33.1-15-12,Subpart D "lb/mmBtu" limit.

III. Corrective Action

The key elements of the corrective action procedures are presented in Table 2. Corrective action is designed to discover and correct the problem that is creating the opacity increase. Corrective action is initiated before an excursion has occurred and continues until the potential excursion condition has been rectified. The trigger point that initiates corrective action is consecutive stack opacity greater than 20 percent based on a six-minute average, excluding those events defined as startup/shutdown and malfunctions. Initiation of corrective action does not create a reporting requirement.

Table 1. Monitoring Approach

		Compliance Indicator
I.	Indicator	Stack opacity.
	Measurement Approach	The opacity is measured using a Continuous Opacity Monitoring System (COMS) at the stack of each boiler.
II.	Indicator Range	An excursion is defined as a measured stack opacity greater than 20 percent, based on a three-hour rolling average, excluding those events defined as startup/shutdown and malfunctions. An excursion triggers a reporting requirement. Corrective action must be initiated when consecutive measured stack opacity six-minute averages are greater than 20 percent excluding those events defined as startup/shutdown and malfunctions. Corrective action does not trigger a reporting requirement.
III.	Performance Criteria	
	A. Data Representativeness	Opacity is related to the size and concentration of particles in the flue gas. As particulate mass emissions increase, it can be reasonably expected that stack opacity will also increase. Each boiler discharges to a single, dedicated stack. Each stack is equipped with a COMS that meets the installation and minimum acceptable accuracy requirements of 40 CFR Part 60, Performance Specification 1. The COMS is located downstream of the scrubber and ESP and, therefore, reflects the performance of both control devices and scrubber bypass operation.
	B. Verification of Operational Status	Not applicable. Monitoring approach uses existing equipment.
	C. QA/QC Practices and Criteria	Daily zero and calibration drift check, periodic cleaning of optical surfaces and other periodic QA/QC checks as specified in the applicable version of Performance Specification 1.
	D. Monitoring Frequency	Continuous.
	Data Collection Procedures	The COMS collects a data point every 10 seconds and the datalogger reduces the data to six-minute averages and three-hour rolling averages.
	Averaging Period	Three-hour rolling average for an excursion. Six-minute block average for corrective action.

Table 2. Corrective Action Procedures Summary

		Description
I.	Initiation of Corrective Action Procedures	Corrective action shall be initiated when consecutive six-minute opacity averages exceeds 20 percent. The plant staff that made the discovery shall immediately notify the leader of plant operations, and the regulatory compliance specialist. If they are unable to be reached, the leader of environmental services shall be notified.
II.	Time of Completion of Corrective Action Procedures	As soon as practically possible.
III.	Corrective Action Description	Figure 1 provides a flow chart summarizing the corrective action procedures. Since the ESPs provide the bulk of the particulate emissions removal, corrective action will focus on ESP operation. Corrective action will begin with an inspection of the COMS. Plant staff should verify the opacity monitor readings, to the extent possible, in the event of a possible COMS malfunction. If it is determined that the opacity monitor readings are accurate, plant staff must then verify whether or not saturated flue gas conditions exist in the stack by observing stack temperature. If saturated stack conditions are present, staff must increase scrubber bypass such that stack temperature increases above saturation. If saturated stack conditions are not present, corrective action will continue. Corrective action will include inspection of one or more ESPs, including an evaluation of the ash removal and rapper systems. Corrective action may also include one or more of the following to reduce opacity below the trigger level: (1) Return tripped ESP sections to service (2) Increase power levels on remaining, in-service sections (to the extent possible) (3) Reduce unit load (if absolutely necessary)

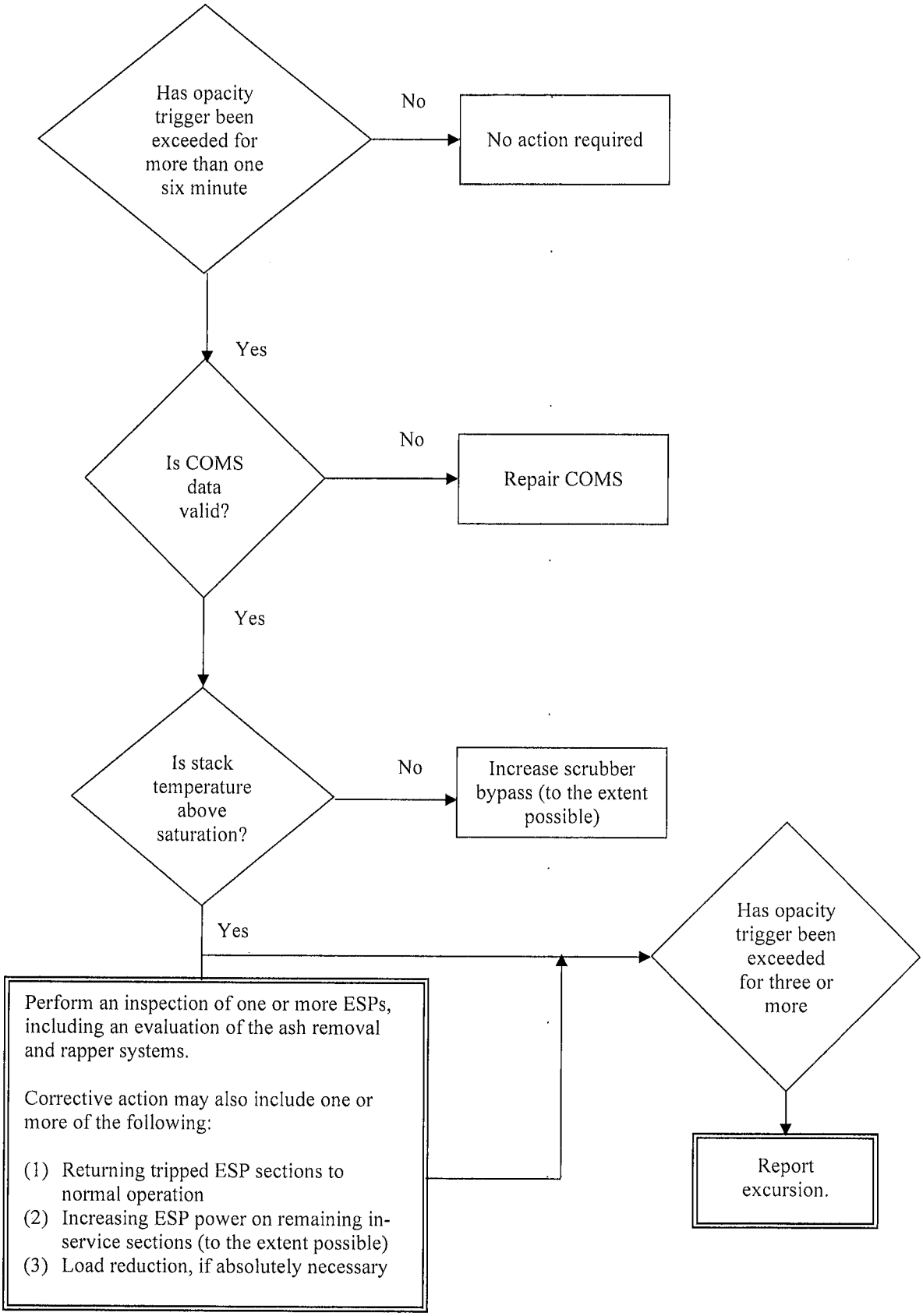

Figure 1. Coal Creek Station CAM Corrective Action Procedures

MONITORING APPROACH JUSTIFICATION

I. Background

Coal Creek is a mine-mouth plant adjacent to the Falkirk Coal Mine in Underwood, ND. Units 1 and 2 are tangentially fired boilers that discharge through separate, dedicated stacks. Unit 1 has a rated heat input of 6,015 mmBtu/hr. Unit 2 has a rated heat input of 6,022 mmBtu/hr. Both units burn lignite coal as their primary fuel and Number 2 fuel oil for unit start-up and flame stabilization. Both boilers are subject to SIP limits (North Dakota Administrative Code § 33.1-15-12, Subpart D and Permit to Construct conditions) for particulate matter. Units 1 and 2 have particulate mass limits of 0.10 lb/mmBtu and 528 lb/hr. The units also have a stack opacity limit of 20 percent, excluding periods of startup and shutdown.

Particulate emissions from each boiler are controlled by two ESPs, located downstream of the air heater in a side-by-side configuration. Each ESP is six fields deep in the direction of gas flow and four sections across. The combined specific collection area for the ESPs is 600 ft^2/1000 acfm. Neither unit has bypass capabilities for the ESPs.

Each unit is also equipped with a spray tower, flue gas desulfurization system downstream of the ESP for the control of SO_2 emissions. Each scrubber is designed to remove up to 90 percent of the SO_2 from the treated gas. The scrubbers can treat up to 95 percent of the boiler gas flow. The remainder of the gas, which bypasses the absorbers, is used for reheating the gas leaving the absorbers and is controlled by bypass damper position. Although the primary function of the control device is SO_2 control, the scrubber does provide some additional particulate removal. Scrubber operation is automatically controlled based on boiler load and is relatively constant at normal, full load. Stack temperature is normally above saturation.[2] Stack reheat systems were installed in 2017 to maintain stack temperature above saturation during maximum scrubbing.

Each stack is equipped with an existing Continuous Opacity Monitoring System (COMS), as required by NDAC § 33.1-15-03-02 and § 33.1-15-12, Subpart D. Currently, both units are subject to 40 CFR 63 Subpart UUUUU and must be tested in accordance with the rule to determine compliance with particulate mass emissions limits. There are no direct, continuous particulate monitoring requirements on either of the units. The most recent particulate compliance test, conducted during September 2021, demonstrated a particulate mass emission rate of 0.006 lb/10^6 Btu for Unit 1 and 0.003 lb/10^6 Btu for Unit 2. Recent testing suggests that both units are able to meet their particulate mass emissions limits without the operation of the scrubber.

A rigorous maintenance program is voluntarily implemented at Coal Creek that is designed to maintain optimal performance of the ESPs. The maintenance program includes a series of daily, weekly, monthly, quarterly, and annual inspections of the equipment. Additional inspections are conducted during major outages. The details of

[2] The stack temperature for Units 1 and 2 during normal operation is between 138 and 145 degrees F. This is above stack saturation.

these inspections are periodically adjusted based on the engineering judgement of the mechanical condition of each control device. Examples of the tasks involved with these inspections are as follows:

Daily Inspections – Inspection procedure may include a check of the ash handling system operation, verification of rapper and voltage controller operation, and/or an inspection of alarm status and shift logs to identify potential operating problems.

Weekly Inspections – Inspection procedure may include checks of the primary voltage and current readings, verification of rapper control systems and operation of rapper drive motors, and/or checks of the transformer-rectifier coolant levels.

Monthly Inspections – Inspection procedure may include a check of the penthouse air conditioning system.

Quarterly Inspections – Inspection procedure may include verification of the automatic voltage controller cabinet ventilating fan operation, cleaning of the control cabinet air filters and/or ventilating fans, and/or verification of ash hopper level indicators.

Annual Inspections – Inspection may include a thorough maintenance routine of penthouse air conditioning system.

Outage Inspections – Inspection procedure may include internal checks for close clearances between discharge electrodes and collecting plates, checks of rapper hammers for wear and/or breakage, verification of hammer and anvil alignment, checks of the rapper drive insulators and drive shafts, and/or checks of the internal structure for signs of deterioration or leakage.

II. Rationale for Selection of Performance Indicators and Indicator Ranges

The purpose of this section is to provide technical justification in support of a compliance assurance protocol based on opacity known as "test and cap." Under a test and cap approach, the relationship of stack opacity to particulate mass concentration is determined at or very near the opacity limit. If the mass concentration is below the permit limit, then two opacity trigger points are set at this level. The first trigger point is the threshold at which corrective action is to be performed. This trigger point indicates that the control device may not be operating properly and action should be taken to restore normal operation. The second trigger point defines an excursion. This trigger point is set at the opacity limit as well but has a longer averaging period and causes a reportable event under CAM.

The COMS will be used as the primary indicator for each unit at Coal Creek. The selected indicator range will be the existing stack opacity limit of 20 percent. Corrective action will be initiated when consecutive six-minute average stack opacity exceeds 20

percent. As described in Table 2, corrective action begins with an evaluation of the occurrence to determine the action required to correct the situation. Consecutive six-minute opacity averages that initiate corrective action do not have to be reported under CAM (the second six-minute average would be reported according to the NSPS standards). An excursion is defined as a three-hour opacity average of 20 percent or higher, excluding startup/shutdown and malfunction events. All excursions will be documented and reported on a unit-basis including the associated corrective action.

Opacity Monitor Theory of Operation

All opacity monitors operate under a physics principle known as optical extinction. In a basic configuration, a beam of light of a specific wavelength is transmitted across a particulate-laden fluid flow. A receiver at some distance from the transmitter measures the amount of light that is received. Due to reflection and refraction of the light beam by the particles within the fluid, the amount of light reaching the receiver will be less than the beam's initial intensity. This property is referred to as transmittance and is represented by the following equation:

$$T = \frac{I}{I_o}$$

Opacity is related to transmittance by the following equation:

$$O = 1 - T$$

The physics of the opacity meter are based on Lambert's Law, which can be expressed mathematically by the following equation:

$$O = 1 - e^{\frac{-S_{avg} m_{avg} x}{4}}$$

Where:
O = opacity of flue gas
S_{avg} = specific surface area of the particles (m^2/g)
m_{avg} = particulate mass concentration (g/Nm^3)
x = optical path length (m)

For a coal-fired boiler equipped with an ESP operating under normal load, the particle size distribution and specific surface area of the particles will remain relatively similar. This means that any change in opacity, as a first-order approximation, will be directly proportional to the mass concentration.[3] Therefore, while opacity is not a direct measurement of particulate mass, it can be used as a surrogate. If opacity is increasing, it can be reasonably expected that the particulate mass concentration is also increasing.

Scrubber Issues

Although the primary function of the scrubbers at Coal Creek is SO_2 removal, particulate removal is a secondary effect of the scrubbing process. For configurations where a wet-

[3] Parker, K.R., Applied Electrostatic Precipitation

impingement scrubber is downstream of an ESP, like Coal Creek, additional particulate removal by the scrubber is relatively small because of the device's low collection efficiency of fine particles. This is exacerbated by the fine particle size distribution of the flue gas exiting the ESP. As a result, under normal operation the ESP will remove most of the particulate matter. This is confirmed by previous test data, which suggest that the scrubbers at Coal Creek are not required to meet the particulate emissions limit.[4] Because of their relative importance to particulate removal, corrective action procedures will focus on the ESPs.

The injection of the lime slurry into the flue gas stream from the scrubbing process provides sensible cooling of the flue gas. Gas temperature decreases while relative moisture content increases. The flue gas is further cooled in the ductwork leading to the stack and within the stack itself. Excessive scrubbing can decrease flue gas temperature to the point where the gas becomes saturated. Under these saturated conditions, water vapor molecules interfere with the operation of the COMS, thereby producing excessively high opacity measurements. Flue gas temperatures suggest that this is not a problem for either unit at Coal Creek. Both stacks operate well above saturation during normal load.[5] At maximum scrubbing condition, the stacks still operate above saturation. Scrubber operation is controlled based on generator load and is relatively constant. As a result, stack temperatures are also relatively constant. Given the possibility that saturated stack conditions may occasionally cause false excursions, part of the initial corrective action procedure is to check for saturated stack conditions and adjust scrubber bypass as necessary to increase temperature above saturation.

The scrubber does not impose any additional restrictions on the application of a test and cap monitoring approach. Under §64.4(g) of the CAM rule, sources may apply a single monitoring approach to multiple control devices. Use of the existing COMS as the compliance indicator for CAM is valid because it reflects the performance of both control devices. If the ESP or scrubber fail for any reason, the net effect will be the same - an increase in opacity and particulate emissions. Furthermore, the COMS will automatically account for the changes in opacity as a result of scrubber bypass operation, thereby fulfilling the bypass monitoring requirements of §64.3(a)(2).

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[4] *A Study of Toxic Emissions from a Coal-Fired Power Plant Utilizing an ESP/Wet FGD System,* U.S. Department of Energy, 1992.

[5] Flue gas temperature is typically above 138° F during normal operation.

Opacity and CAM

Developing an accurate correlation between opacity and particulate mass is difficult, if not impossible, because of the variability in the process factors that affect the particle properties and size distribution. For CAM, however, it is sufficient that the indicator and emission rate are related so as to provide a reasonable assurance of compliance. The previous section on opacity measurement principles demonstrates this relationship. Furthermore, the use of opacity as a CAM indicator for particulate mass, with the existing opacity limit as the indicator range, is considered presumptively acceptable under §64.3(d), provided there are sufficient data to show that this indicator range is appropriate.

Verification of Opacity/Mass Relationships

Particulate mass emissions tests were conducted at the stack of each unit to validate the selection of the monitoring approach and indicator range. The objective of the testing was to derive the opacity/mass relationship for each unit and show that while opacity is maintained at or below the current opacity limit, both units also demonstrate a reasonable assurance of compliance with the particulate mass limits. Testing was conducted on Units 1 and 2 beginning June 16, 2003, through June 21, 2003. Additional details on the results of the particulate testing can be found in the final test report.[6]

The test program was designed to simulate boiler and control device operation under the normal or "baseline" operating condition and under two additional conditions that simulated varying degrees of control device failure. Since the ESPs are the primary particulate control devices for both units and the most likely cause of any excursions, tests simulating control device failures were conducted only for the ESPs. Both scrubbers were under normal, steady-state operation for the duration of each test. Any change in stack opacity and particulate mass emissions was attributed to the operation of the ESPs.

The most common types of ESP failure (or cause of reduced performance) are either grounded fields or close clearances. In order to simulate these conditions, the ESP of the tested unit was "de-tuned" by reducing and/or eliminating power to selected portions of the precipitator. This effectively increases the particulate mass loading and opacity at the stack. These "de-tuned" tests included a "high-level" test, where the stack opacity was close to the 20 percent limit, and a "mid-level" test where the stack opacity is approximately halfway between the high-level test and the normal operating duct opacity.

For each test, boilers were operated at normal full load. This represents the highest level of particulate mass emissions and will produce conservative indicator ranges under the proposed CAM monitoring approach. Each test consisted of three runs using EPA Reference Method 17. Boiler, scrubber and ESP operating data were also taken to demonstrate stable, normal load operation during each test.

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[6] *Compliance Assurance Monitoring Performance Testing, Coal Creek Station, Units 1 and 2,* RMB Consulting & Research, 9/19/03.

Unit 1 Results

Table 1 shows a summary of the test results for Unit 1. For the baseline condition, the data show an opacity of two percent and particulate emissions rates of 0.003 lb/mmBtu and 18 lb/hr. This suggests that Unit 1 operates at less than five percent of its mass limit during normal operation.

Test Condition	Stack Opacity	Particulate Mass Emissions [lb/mmbtu]	Particulate Mass Emissions [lb/hr]
Baseline	2	0.003	18
ESP "De-tuned" (Mid)	12	0.032	196
ESP "De-tuned" (High)	17	0.038	229

Table 3. Unit 1 CAM Test Results

For the "de-tuned" tests, Unit 1 boiler was operating under steady, normal load and the ESP power levels where reduced to simulate control device failure. For the "mid-level" condition, the data show an opacity of 12 percent and particulate mass emissions rates of 0.032 lb/mmBtu and 196 lb/hr. For the "high-level" condition, the data show an opacity of 17 percent and particulate mass emissions rates of 0.038 lb/mmBtu and 229 lb/hr.

Figures 2 and 3 show graphs of the opacity/unit mass relationships for Unit 1 including the baseline and de-tuned operating conditions. Based on a four-point linear regression, the predicted mass emissions rates at 20 percent opacity are 0.049 lb/mmBtu and 296 lb/hr. The data suggest that, under this "worst-case" scenario, the particulate mass emissions are approximately 50 percent of the mass emissions limits. This suggests a relatively large compliance margin for CAM.

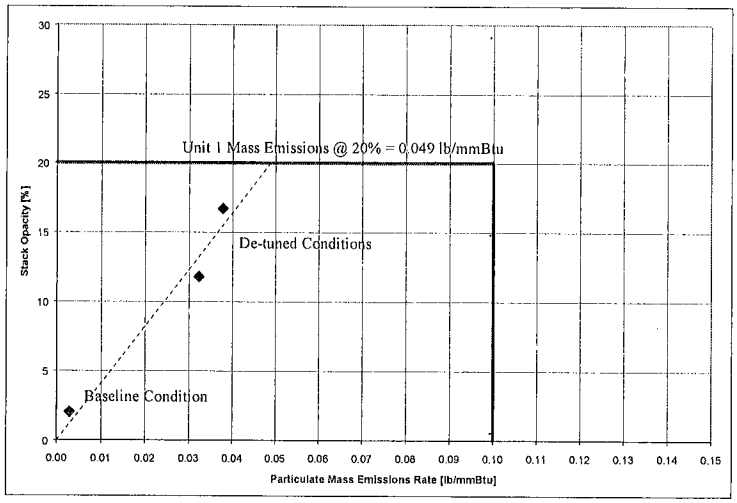

Figure 2. Unit 1 Opacity/Mass Relationship [lb/mmBtu]

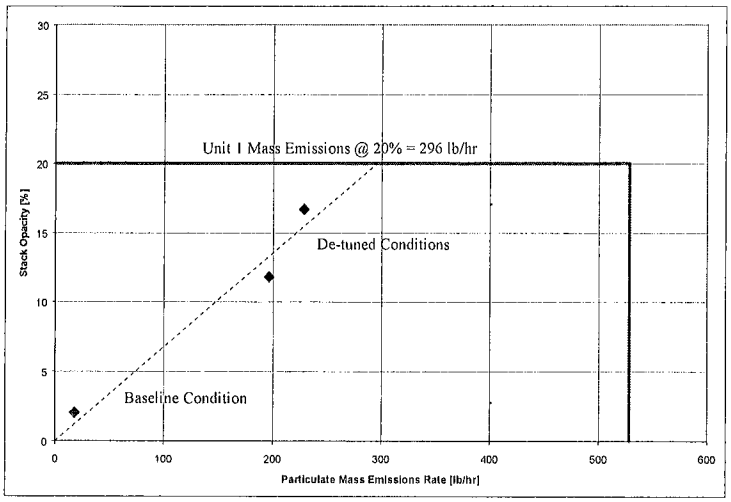

Figure 3. Unit 1 Opacity/Mass Relationship [lb/hr]

Unit 2 Results

Table 4 shows a summary of the test results for Unit 2. For the baseline condition, the data show an opacity of five percent and particulate emissions rates of 0.004 lb/mmBtu and 18 lb/hr. This suggests that Unit 2 also operates at less than five percent of its mass limit during normal operation.

Test Condition	Stack Opacity	Particulate Mass Emissions [lb/mmbtu]	Particulate Mass Emissions [lb/hr]
Baseline	5	0.004	28
ESP "De-tuned" (Mid)	14	0.023	151
ESP "De-tuned" (High)	18	0.040	354

Table 4. Unit 2 CAM Test Results

For the "de-tuned" tests, Unit 2 boiler was operating under steady, normal load and the ESP power levels where reduced to simulate control device failure. For the "mid-level" condition, the data show an opacity of 14 percent and particulate mass emissions rates of 0.023 lb/mmBtu and 151 lb/hr. For the "high-level" condition, the data show an opacity of 18 percent and particulate mass emissions rates of 0.040 lb/mmBtu and 354 lb/hr.

Figures 4 and 5 show graphs of the opacity/unit mass relationships for Unit 2 including the baseline and de-tuned operating conditions. Based on a four-point linear regression, the predicted mass emissions rates at 20 percent opacity are 0.040 lb/mmBtu and 341 lb/hr. The data suggest that, under this "worst-case" scenario, the particulate mass emissions are less than 50 percent of the "lb/mmbtu" mass emissions limit and less than 65 percent of the "lb/hr" emissions limit.

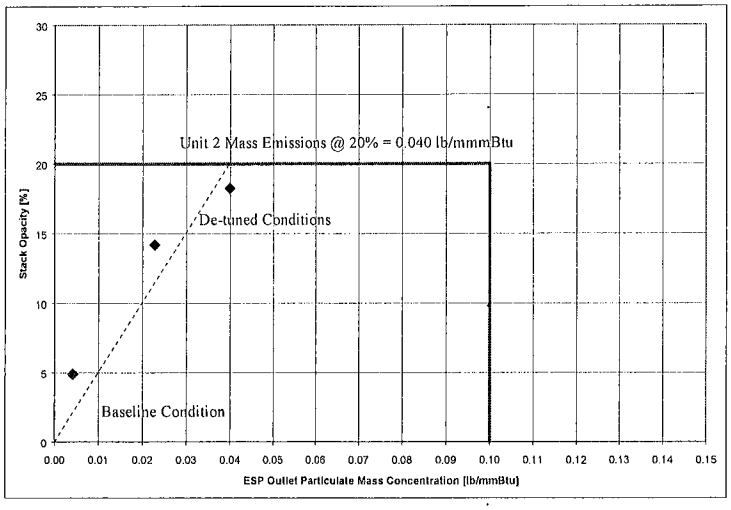

Figure 4. Unit 2 Opacity/Mass Relationship [lb/mmBtu]

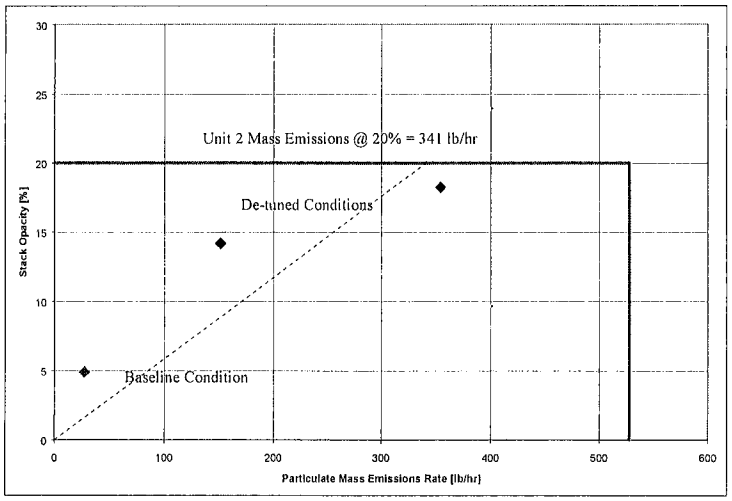

Figure 5. Unit 2 Opacity/Mass Relationship [lb/hr]

Monitoring Approach Validity

The test data show that the opacity/mass relationships support the proposed test and cap approach using the COMS as the primary indicator with a trigger level of 20 percent for both corrective action and excursions. In all cases, the opacity/mass relationships predicted mass emissions that were below the mass limits of each unit at 20 percent opacity. This suggests that the selected indicator and indicator range meet the general design criteria outlined in §64.3(a) of the CAM Rule and will be sufficient to demonstrate a reasonable assurance of compliance during normal operation of each unit.

Rainbow Energy Center, LLC
Coal Creek Station
Title V Permit to Operate No. AOP-28371 v6.0
Statement of Basis
(4/15/24)

Facility Background: Coal Creek Station (CCS) is a two-unit 1200+ gross megawatt (MW) mine-to-mouth electric generating facility consisting primarily of two steam generators and associated coal and ash handling systems. Unit 1 and Unit 2 are Combustion Engineering boilers firing pulverized lignite coal tangentially from a maximum of 64 firing points each. Particulate matter from each boiler is controlled by a 99.5% efficient electrostatic precipitator (ESP) consisting of 48 transformer rectifier (TR) sets. A four-module flue gas desulfurization (FGD) system (wet scrubber) for each boiler removes approximately 98% of the sulfur dioxide from 90% of the flue gas. Each boiler is served by a 675-foot-high stack. In 2008 CCS began supplying steam to the nearby Blue Flint Ethanol Plant.

Chronology of significant events (not all-inclusive):

April 11, 1975 - Conditional Permit to Construct (PTC) was issued; Prevention of Significant Deterioration (PSD) and Best Available Control Technology (BACT) were considered.

1979 and 1980 - Unit 1 and Unit 2 began commercial operations.

July 8, 1982 - Initial Permit to Operate (PTO) F82006 was issued; F82006 was renewed approximately every three years until 1995.

December 18, 1997 - Initial Title IV permit for the facility was issued.

July 28, 1998 - Initial Title V PTO (T5-F82006) was issued.

October 8, 2001 - PTC01016 was issued for a fly ash conveyance and storage system.

September 7, 2004 - First Title V PTO renewal (Renewal No. 1) was issued.

May 25, 2004 - PTC04006 was issued to install a prototype coal dryer (Phase I).

March 3, 2005 - Title V PTO Renewal No. 1, Revision No. 1 incorporated administrative changes.

April 20, 2006 - Title V PTO Renewal No. 1, Revision No. 2 incorporated minor modifications.

June 2, 2006 - Title V PTO Renewal No. 1, Revision No. 3 (AOP-28371 v2.3) incorporated administrative changes.

March 9, 2007 - Title V PTO Renewal No. 1, Revision No. 4 (AOP-28371 v2.4) incorporated PTC04006 (significant modifications).

May 11, 2007 - PTC07014 (ACP-17130 v1.0) was issued for the Unit 2 Lignite Fuel Enhancement Project (added the Unit 2 Coal Dryer System).

June 26, 2007 - PTC07016 (ACP-17132 v1.0) was issued for the Lignite Fuel Enhancement System; added four coal dryers to Unit 1, a new coal crushing system, a dryer rejects system and associated conveyors, hoppers, feeders, bins and loadouts.

July 27, 2009 - PTC09017 (ACP-17217 v1.0) was issued for the Prototype Static Drying System; this system was not constructed, and the PTC was terminated.

October 16, 2009 -Title V PTO Renewal No. 2 (AOP-28371 v3.0) was issued with a replacement of the emergency fire pump engine.

February 23, 2010 - PTC10005 (ACP-17249 v1.0) was issued and established Best Available Retrofit Technology (BART) emission limits.

March 31, 2011 - Title V PTO Renewal No. 2, Revision No. 1 (AOP-28371 v3.1) incorporated the conditions of ACP-17130 v1.0 and ACP-17132 v1.0.

October 21, 2014 - Renewal No. 3 of the Title V PTO (AOP-28371 v4.0) incorporated the conditions of several newer boiler and engine rules.

February 2, 2015 - PTC15011 (ACP-17706 v1.0) was issued for an emergency generator (EU 46/EP50).

September 2, 2015 - PTC15059 (ACP-17754 v1.0) was issued for an air jig rejects material handling system (EU 47 through 50/EP 51 through 54).

January 30, 2015 -Title V PTO Renewal No. 3, Revision No. 1 (AOP-28371 4.1) was issued with administrative amendments.

November 25, 2015 - Title V PTO Renewal No. 3, Revision No. 2 (AOP-28371 4.2) was issued with additional administrative changes.

September 18, 2019 - Title V PTO Renewal No. 4 (AOP-28371 v5.0) was issued; included ACP-17706 v1.0 and ACP-17754 v1.0, along with the SO_2 BART limits, monitoring, recordkeeping and reporting from ACP-17249 v1.0.

May 1, 2022 - AOP-28371 v5.1 was issued for a permittee name and address change (from Great River Energy to Rainbow Energy Center LLC).

Current Action: On February 6, 2024, the Department received a timely permit application dated January 29, 2024 from Rainbow Energy Center for renewal of the Coal Creek Station Title V Permit No. AOP-28371 (and Acid Rain permit). All of the edits in the draft permit are

administrative in nature. NO_x BART requirements from ACP-17249 v1.0 are not final (awaiting EPA approval), so those conditions have not been included in the draft permit.

The Department proposes to issue Title V permit No. AOP-28371 v6.0 after the required 30-day public comment period and subsequent 45-day EPA review period of the draft permit. This statement of basis summarizes the relevant information considered during the issuance of the Title V permit. The legal basis for each permit condition is stated in the draft permit under the heading of "Applicable Requirement."

Applicable Programs/As-Needed Topics:

1. **Title V.** The facility requires a Title V Permit to Operate because it is considered a major source under NDAC 33.1-15-14-06 (40 CFR 70) due to potential emissions of PM_{10}, SO_2, NO_x, CO and VOC above 100 tons per year, and individual Hazardous Air Pollutant (HAP) emissions (hydrogen chloride and hydrogen fluoride) above 10 tons per year.

2. **New Source Performance Standards (NSPS).** The following NDAC 33.1-15-12-02 and 40 CFR 60 subparts apply to the facility.

   Subpart A, General Provisions, applies to all source units to which another NSPS subpart applies.

   Subpart D, Standards of Performance for Fossil-Fuel Fired Steam Generators. Applies to the boilers (EU 1 and EU 2) because they were constructed after August 17, 1971 (built in 1979 and 1980), and they have a heat input rating greater than 250 million Btu per hour (actual 6,015 and 6,022 million Btu per hour).

   Subpart Y, Standards of Performance for Coal Preparation Plants (coal handling conveys and crushes more than 200 tons per day of coal and constructed after October 24, 1974); EU 7 through EU 17, EU 28 through EU 30, EU 39 through EU 45 and EU 47 through EU 50. Subpart Y applies to thermal dryers that process bituminous coal only; this subpart does not apply to the coal dryers at this facility because they process only lignite coal.

   Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines applies to the emergency engines and fire pump engine (EU 5, EU 6 and EU 46).

3. **National Emission Standards for Hazardous Air Pollutants (NESHAP).** No NDAC 33.1-15-13 and 40 CFR 61 subparts apply to the facility, with the possible exception of NDAC 33.1-15-13-02 (40 CFR 61) Subpart M (National Emission Standard for Asbestos) may apply during facility modifications involving asbestos.

4. **Maximum Achievable Control Technology (MACT) Standards.** The following NDAC 33.1-15-22-03 and 40 CFR 63 subpart applies to the facility, which is a major source of HAP emissions.

Subpart A, General Provisions, applies to all source units to which another MACT subpart applies.

Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, applies to the engines (EU 5, EU 6 and EU 46).

Subpart DDDDD, Industrial, Commercial and Institutional Boilers and Process Heaters applies to the auxiliary boiler (EU 3 and EU 4) because they are fuel oil-fired, industrial boilers located at a major source of hazardous air pollutants. The auxiliary boilers are considered *limited-use* boilers under this subpart because the draft permit limits each boiler to an average annual capacity factor of no more than 10 percent.

Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units applies to the coal-fired boilers (EU 1 and 2).

5. **Acid Rain.** NDAC 33.1-15-21 (40 CFR 72, 73, 75 and 76) applies to the facility since it is an existing electric utility steam generating plant rated at greater than 25 MWe.

6. **Prevention of Significant Deterioration (PSD).** The facility is a major source under NDAC 33.1-15-15 (40 CFR 52) because it is a fossil-fuel fired steam electric plant with a heat input of more than 250 million Btu per hour that has the potential to emit more than 100 tons per year of a criteria pollutant. There are no changes contained in this draft permit that increase potential emissions by a PSD-significant amount. Therefore, this draft permit is not subject to PSD review.

7. **Best Available Control Technology (BACT).** Since there are no changes contained in this draft permit that increase potential emissions by a PSD-significant amount, a BACT review is not required.

8. **Gap Filling for Periodic Monitoring.** Although the permit does contain gap filling for testing, monitoring or recordkeeping not otherwise required by rule, this draft permit does not contain revisions to previously permitted gap filling, monitoring and recordkeeping. The gap filling conditions are generally identified by the applicable requirement NDAC 33.1-15-14-06.5.a(3)(a).

9. **Streamlining Decisions.** Due to streamlining, some particulate matter and opacity limits established under NDAC 33.1-15-05-01, 33.1-15-03, and 33.1-15-12-02, Subpart Y are not reflected in the permit because they are less restrictive than BACT limits. Also, engine NO_x and CO emission limits established by ND are streamlined because 40 CFR 60 (Subpart IIII) and 40 CFR 63 (Subpart ZZZZ) provide more stringent limits to emissions and operations. There are no revisions to previously permitted streamlining decisions.

10. **Compliance Assurance Monitoring (CAM).** CAM applies to the Unit 1 and 2 boilers; administrative updates were made to the CAM Plan. CAM is not applicable to any of the newer units because uncontrolled potential emissions are not equal to or greater than 100 tons/year for criteria pollutants.

11. **Permit Shield.** No change was made to the permit shield contained in Condition 9 (Phase II Acid Rain Provisions).

12. **New Conditions/Limits.** No new conditions or limits have been incorporated into this draft permit. Specific changes in the are addressed in the Permit Changes by Section below.

13. **40 CFR 98 - Mandatory Greenhouse Gas Reporting.** This rule requires sources above certain emission thresholds or in certain supplier thresholds to calculate, monitor, and report greenhouse gas emissions. According to the definition of "applicable requirement" in 40 CFR 70.2, neither Subpart 98, nor Clean Air Act Section 307(d)(1)(V), the CAA authority under which Subpart 98 was promulgated, are listed as applicable requirements for the purpose of Title V permitting. Although the rule is not an applicable requirement under 40 CFR 70, the source is not relieved from the requirement to comply with the rule separately from compliance with their Part 70 operating permit. It is the responsibility of each source to determine applicability to the subpart and to comply, if necessary.

Permit Changes by Section:

Note: Administrative changes were made to some sections of the permit to update to the current North Dakota (ND) format and to correct errors. In addition, the Permit to Operate number and references to Permit to Construct numbers have been updated to accommodate the Air Quality database (CERIS-ND). These changes may not be specifically addressed below.

Cover: Permittee address, permit version number and dates were updated.

Table of Contents: Page numbers were updated.

1. **Emission Unit Identification**: Applicable subparts were added to the table as appropriate and footnote A was updated to the current ND standard. The scrubber building flyash silo (stackout) was removed from the fugitive emission sources since it is no longer on site. Condition 1.C was added for the CEMS/COMS/CMS equipment.

2. **Applicable Standards, Restrictions and Miscellaneous Conditions**: Applicable requirement references were updated as appropriate.

3. **Emission Unit Limits**: The NDAC applicable requirement references were updated as appropriate and the opacity limits were added to the table and table footnotes. The standard fugitive emissions opacity limit was added in Condition 3.C.

4. **Monitoring Requirements and Conditions**: The NDAC applicable requirement references and condition number references were updated in the table as appropriate. The visual emissions observation monitoring condition and engine monitoring condition were both updated to the current ND standard. Tune-ups were added as part of the PM monitoring for the auxiliary boilers (EU 3 and EU 4); had been included as monitoring for NO_x and HAP emissions in previous permitting. Condition 4.B.18 was added for EU 1 and EU 2 HCl monitoring clarification.

5. **Recordkeeping Requirements**: Tune-ups were added as part of the PM compliance monitoring record in the table for the auxiliary boilers (EU 3 and EU 4); had been included as monitoring for NO_x and HAP emissions in previous permitting.

6. **Reporting**: Several conditions were update to the current ND standard reporting conditions.

7. **Facility Wide Operating Conditions**: The Noncompliance Due to an Emergency condition (7.H) was removed per EPA's Affirmative Defense Provision Rule effective 8/21/23 and to reflect the current ND standard facility wide operating conditions. All subsequent condition lettering designation was updated.

8. **General Conditions**: No changes.

9. **Phase II Acid Rain Provisions**: No changes.

10. **State Enforceable Only Conditions (not Federally enforceable)**: No changes.

Attachment A – CAM: The revision date and review date were updated and the Rainbow Energy Center contact information was added to the cover page. Reference to the NDAC regulation was updated on page one.

Comments/Recommendations: It is recommended that Title V Permit to Operate No. AOP-28371 v6.0 be processed and considered for issuance following a 30-day public comment period and a subsequent 45-day EPA review period.