NORTH Dakota | Environmental Quality
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March 20, 2024

Ms. Erin Fox Dukart
Environmental Services Director
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503

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

Dear Ms. Fox Dukart:

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 October 31, 2023, for the Antelope Valley Station located in Mercer 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 March 29, 2024 and end April 27, 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 April 28, 2024 and end June 11, 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:
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 a Permit to Operate to Basin Electric Power Cooperative (BEPC) for continued operation of the Antelope Valley Station in accordance with the North Dakota Air Pollution Control Rules. The Antelope Valley Station is located at is located in Mercer County at 294 County Road 15, Beulah, ND in Mercer County and is a coal-fired, base-load electrical generating facility. The BEPC mailing address is 1717 East Interstate Avenue, Bismarck, ND 58503-0564. There are no changes in potential emissions.

A 30-day public comment period for the draft permit will begin March 29, 2024 and end on April 27, 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-28373 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 20th day of March 2024

James L. Semerad
Director
Division of Air Quality

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AIR POLLUTION CONTROL
TITLE V PERMIT TO OPERATE

Permittee: **Name:** Basin Electric Power Cooperative **Address:** 1717 E Interstate Avenue Bismarck, ND 58503-0564	**Permit Number:** AOP-28373 v6.0 **Source Name:** Antelope Valley Station
Source Location: 294 County Road 15 Beulah, ND 58523 S24, T145N, R88W Mercer County	**Source Type:** Electric Generating Units, Coal
Expiration Date: May 25, 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

Antelope Valley 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
Combustion Engineering coal-fired boiler with a nominal rated heat input capacity of 6,275 x 10^6 Btu/hr (NSPS D & MACT UUUUU)	Unit 1	1	Dry Scrubber, Baghouse & Post-combustion Sorbent Injection
Combustion Engineering coal-fired boiler with a nominal rated heat input capacity of 6,275 x 10^6 Btu/hr (NSPS D & MACT UUUUU)	Unit 2	2	Dry Scrubber, Baghouse & Post-combustion Sorbent Injection
Zurn Energy auxiliary boiler with a nominal rated heat input capacity of 137.7 x 10^6 Btu/hr and horizontally fired by natural gas or propane (MACT DDDDD)	Auxiliary Boiler	3	None
Cummins diesel engine driven emergency fire pump engine 4SLB, 219 bhp (2023 Tier 3 Certified; NSPS IIII & MACT ZZZZ)	Emergency Fire Pump Engine [A]	5	None
5.7 x 10^6 Btu/hr natural gas-fired heater	Natural Gas Heater [B]	6	None
3.5 x 10^6 Btu/hr natural gas-fired heater	Natural Gas Heater 2 [B]	7	None
Coal handling system with emissions from the following areas:			
South row silos (NSPS Y)	Dust Collector 1A	M1	Carter-Day, Model 376RF6 Baghouse
North row silos (NSPS Y)	Dust Collector 1B	M2	Carter-Day, Model 376RF9 Baghouse
South row transfer tower (NSPS Y)	Dust Collector 1C	M3	Carter-Day, Model 232RF7 Baghouse
Plant transfer tower (NSPS Y)	Dust Collector 1D	M4	Carter-Day, Model 376RF6 Baghouse
Plant conveyor loading chute (NSPS Y)	Dust Collector 1E	M5	Carter-Day, Model 376RF6 Baghouse
Stackout conveyor loading chute (NSPS Y)	Dust Collector 1K	M6	Carter-Day, Model 376RF9 Baghouse
Emergency stackout building (NSPS Y)	Dust Collector 1H	M7	Carter-Day, Model 376RF9 Baghouse
Unit 2 south row coal silos (NSPS Y)	Dust Collector 2A	M8	Carter-Day, Model 376RF9 Baghouse

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Unit 2 north row coal silos (NSPS Y)	Dust Collector 2B	M9	Carter-Day, Model 376RF9 Baghouse
Unit 2 south row transfer tower (NSPS Y)	Dust Collector 2C	M10	Carter-Day, Model 232RF9 Baghouse
Unit 1 north row transfer tower (NSPS Y)	Dust Collector 2D	M11	Carter-Day, Model 232RF9 Baghouse
Dry SO_2 scrubber raw materials handling with emissions from the following areas:			
Unit 1 scrubber lime day tank	Unit 1 Day Tank	M12	Pulse flow Model PF24508-49 Baghouse
Lime unloading building	Lime Unloading Building	M13	Pulse flow Model PF6012-260 Baghouse
Lime silo	Lime Silo	M14	Pulse flow Model PR24508 Baghouse
Unit 2 scrubber lime day tank	Unit 2 Day Tank	M15	Pulse flow Model PF24508-49 Baghouse
Water treatment facility with emissions from the following areas:			
Primary water treatment	Primary Water Treatment [B]	M16	Mikro Pulsaire Model 8B Baghouse to control emissions from the bin vent
Lime day Tank B - primary water treatment	Lime Day Tank [B]	M17	Mikro Pulsaire Model 8B Baghouse to control emissions from the bin vent
Lime day tank - Great Plains Coal Gasification Plant	Lime Day Tank - Great Plains [B]	M18	Mikro Pulsaire Model 8B Baghouse to control emissions from the bin vent
Lime storage bin	Lime Bin 1 [B]	M19	Baghouse
Lime storage bin	Lime Bin 2 [B]	M20	Baghouse
Rail car coal loadout (NSPS Y)	Rail Car Coal Loadout	F3	Baghouse
Other:			
Unit 1 Sorbent Injection Silo	Sorbent Injection Silo 1 [B]	M21	Bin Vent Filter
Unit 2 Sorbent Injection Silo	Sorbent Injection Silo 2 [B]	M22	Bin Vent Filter

[A] 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] Insignificant or fugitive emission sources (no specific emission limit).

B. **Fugitive Emission Sources**:

1) 200,000 gpm cooling tower (Cooling Tower No. 1)

2) 200,000 gpm cooling tower (Cooling Tower No. 2)

3) Emergency stackout coal pile

4) Dead coal storage pile

C. **Continuous Emission/Opacity/Monitoring Systems (CEMS/COMS/CMS) for EU Unit 1 and Unit 2 (EP 1 and EP 2)**:

1) The flue gas from EU Unit 1 and Unit 2 is emitted through separate 600-foot stacks. Each stack is equipped with the following continuous emission monitors:

a) One sulfur dioxide continuous emission monitor

b) One nitrogen oxides continuous emission monitor

c) One carbon dioxide continuous emission monitor

d) One sorbent trap monitoring system or one mercury CEMS

e) One opacity monitor

f) One flow monitor

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 Unit 1 and Unit 2 shall combust only lignite coal, subbituminous coal, No. 2 fuel oil, natural gas and tar oil. Used oil may be burned in EU Unit 1 and Unit 2 as outlined below.

a) Combustion of Used Oil Containing PCBs (State Enforceable Only): Burning of used oil containing PCBs is allowed in EU Unit 1 and Unit 2 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 Basin Electric Power Cooperative, 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 (State Enforceable Only): Burning of used oil 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] The annual emission inventory reports required by Condition 6.F shall include the amount of waste oil burned.

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

2) The auxiliary boiler (EU Auxiliary Boiler) shall combust only natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet or commercial propane as defined by the Gas Processors Association.

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

3) The emergency fire pump engine (EU Emergency Fire Pump Engine) shall combust only distillate oil containing no more than 0.0015% sulfur by weight.

Applicable Requirements: NDAC 33.1-15-12-02, Subpart IIII and NDAC 33.1-15-14-06.5.b(1)

B. **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 for Which Construction Is Commenced After August 17, 1981 (EU Unit 1 and Unit 2).

2) Subpart Y – Standards of Performance for Coal Preparation Plants (EU Dust Collectors 1A through 1E, 1K, 1H, 2A through 2D and Railcar Coal Loadout/EP M1 through M11 and F3).

3) Subpart IIII (4I) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (EU Emergency Fire Pump Engine).

Applicable Requirements: NDAC 33.1-15-12-02, Subparts A, D, Y and IIII

C. **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 Emergency Fire Pump Engine).

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

a) EU Auxiliary Boiler is classified as a *limited-use boiler*. In order to maintain *limited-use boiler* classification as defined by 40 CFR 63 Subpart DDDDD, EU Auxiliary Boiler is limited to no more than 876 hours per calendar year to provide a federally enforceable average annual capacity factor of no more than 10 percent. This limit ensures the unit is a *limited-use boiler* as defined by 40 CFR 63, Subpart DDDDD.

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

a) Conduct a tune-up on each existing coal-fired boiler (EU Unit 1 and Unit 2) 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.

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 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	NDAC Applicable Requirement
Combustion Engineering boiler	Unit 1	1	PM	0.10 lb/10^6 Btu [A] & 210 lb/hr [B]	33.1-15-12-02, Subpart D & PTC 2/23/78
			PM (filterable)	0.03 lb/10^6 Btu [C] (See Condition 4.B.8)	33.1-15-22-03, Subpart 5U
			SO_2 [D]	1.2 lb/10^6 Btu [E] & 3,845 lb/hr [F]	33.1-15-12-02, Subpart D & PTC 2/23/78
			NO_x	0.5 lb/10^6 Btu [G] & 0.17 lb/10^6 Btu [C] & 4,930 lb/hr [F] & See Cond. 4.B.13	PTC 2/23/78 & 33.1-15-25 & 40 CFR 52
			Hg	4.0 lb/10^{12} Btu [C] or 0.04 lb/GWh [C]	33.1-15-22-03, Subpart 5U
			HCl	0.002 lb/10^6 Btu [C] or 0.02 lb/MWh [C] or SO_2 Surrogate: 0.2 lb/10^6 Btu [C] or 1.2 lb/MWh [C]	33.1-15-22-03, Subpart 5U
			Opacity	20% [H, I]	33.1-15-12-02, Subpart D & 33.1-15-03-02

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit	NDAC Applicable Requirement
Combustion Engineering boiler	Unit 2	2	PM	0.10 lb/10^6 Btu [A] & 210 lb/hr [B]	33.1-15-12-02, Subpart D & PTC 2/23/78
			PM (filterable)	0.03 lb/10^6 Btu [C] (See Condition 4.B.8)	33.1-15-22-03, Subpart 5U
			SO_2 [D]	1.2 lb/10^6 Btu [E] & 3,845 lb/hr [F]	33.1-15-12-02, Subpart D & PTC 2/23/78
			NO_x	0.5 lb/10^6 Btu [G] & 0.17 lb/10^6 Btu [C] & 4,930 lb/hr [F] & See Cond. 4.B.13	PTC 2/23/78 & 33.1-15-25 & 40 CFR 52
			Hg	4.0 lb/10^{12} Btu [C] or 0.04 lb/GWh [C]	33.1-15-22-03, Subpart 5U
			HCl	0.002 lb/10^6 Btu [C] or 0.02 lb/MWh [C] or SO_2 Surrogate: 0.2 lb/10^6 Btu [C] or 1.2 lb/MWh [C]	33.1-15-22-03, Subpart 5U
			Opacity	20% [H, I]	33.1-15-12-02, Subpart D & 33.1-15-03-02
Zurn Energy auxiliary boiler	Auxiliary Boiler	3	SO_2	42.7 lb/hr [B]	PTC 2/23/78
			NO_x	20.1 lb/hr [B]	PTC 2/23/78
			Opacity	20% [I]	33.1-15-03-02
			Operating Hours	876 hrs/yr	33.1-15-22-03, Subpart 5D & 33.1-15-14-06.5.b(1)
Diesel engine	Emergency Fire Pump Engine	5	Opacity	20% [I]	33.1-15-03-01.2
			Operating Hours	See Cond. 1.A Footnote A	33.1-15-12-02, Subpart 4I & 33.1-15-22-03, Subpart 4Z
Natural gas-fired heater	Heater	6	Opacity	20% [I]	33.1-15-03-02

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit	NDAC Applicable Requirement
Coal handling system with emissions from the following areas:					
South row silos	Dust Collector 1A	M1	PM Opacity	1.97 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-12-02, Subpart Y
North row silos	Dust Collector 1B	M2	PM Opacity	1.97 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-12-02, Subpart Y
South row transfer tower	Dust Collector 1C	M3	PM Opacity	1.89 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Plant transfer tower	Dust Collector 1D	M4	PM Opacity	2.83 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Plant conveyor loading chute	Dust Collector 1E	M5	PM Opacity	3.26 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Stackout conveyor loading chute	Dust Collector 1K	M6	PM Opacity	3.26 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Emergency stackout building	Dust Collector 1H	M7	PM Opacity	2.23 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Unit 2 south row coal silos	Dust Collector 2A	M8	PM Opacity	1.97 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Unit 2 north row coal silos	Dust Collector 2B	M9	PM Opacity	1.97 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Unit 2 south row transfer tower	Dust Collector 2C	M10	PM Opacity	1.89 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y
Unit 1 north row transfer tower	Dust Collector 2D	M11	PM Opacity	1.89 lb/hr [B] <20% [I, J]	33.1-15-14-06.5.b(1) 33.1-15-03-02 & 33.1-15-12-02, Subpart Y

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit	NDAC Applicable Requirement
Dry SO_2 scrubber raw materials handling with emissions from the following areas:					
Unit 1 scrubber lime day tank	Unit 1 Day Tank	M12	PM	0.21 lb/hr [B]	33.1-15-14-06.5.b(1)
			Opacity	20% [I]	33.1-15-03-02
Lime unloading building	Lime Unloading Building	M13	PM	0.58 lb/hr [B]	33.1-15-14-06.5.b(1)
			Opacity	20% [I]	33.1-15-03-02
Lime silo	Lime Silo	M14	PM	0.42 lb/hr [B]	33.1-15-14-06.5.b(1)
			Opacity	20% [I]	33.1-15-03-02
Unit 2 scrubber lime day tank	Unit 2 Day Tank	M15	PM	0.21 lb/hr [B]	33.1-15-14-06.5.b(1)
			Opacity	20% [I]	33.1-15-03-02
Rail car loadout	Rail Car Loadout	F3	PM	0.34 lb/hr [B]	33.1-15-14-06.5.b(1)
			Opacity	20% [I, J]	33.1-15-12-02, Subpart Y
Other:					
Unit 1 sorbent injection silo	Sorbent Injection Silo 1	M21	Opacity	20% [I]	33.1-15-03-02
Unit 2 sorbent injection silo	Sorbent Injection Silo 2	M22	Opacity	20% [I]	33.1-15-03-02

A 1-hour average. This standard does not apply during startup, shutdown and malfunction.
B 1-hour average
C 30-boiler operating day rolling average
D The prorated standard for SO_2 emissions contained in 33.1-15-12-02, Subpart D is applicable when burning tar oil.
E 3-hour rolling average. This standard does not apply during startup, shutdown and malfunction.
F 3-hour rolling average. The emission limit is the total allowed from Units 1 and 2 combined.
G 3-hour rolling average
H Twenty percent opacity, except that a maximum twenty-seven percent is permissible for not more than one six-minute period per hour. This standard does not apply during startup, shutdown and malfunction.
I Twenty percent opacity, except that a maximum of forty percent is permissible for not more than one six-minute period per hour. This standard applies at all times.
J Twenty percent opacity or greater shall not be discharged into the atmosphere. This standard does not apply during startup, shutdown and malfunction.

B. **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	EP	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Combustion Engineering boiler	1	PM/ PM (filterable)	O&M/Compliance Assurance Monitoring (CAM) & Emissions Test	4.B.1, 4.B.7, 4.B.8 & 4.B.11	33.1-15-12-02 33.1-15-14-06.5.a(3)(a), 33.1-15-21 & 33.1-15-22-03, Subpart 5U
		SO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4 & 4.B.7	33.1-15-12-02, Subpart D & 33.1-15-21
		NO_x	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7, 4.B.13 & 4.B.14	33.1-15-14-06.5.a(3)(a), 33.1-15-21 & 40 CFR 52
		CO_2	CEMS	4.B.1, 4.B.3 & 4.B.4	33.1-15-12-02, Subpart D & 33.1-15-21
		Hg	CEMS or Sorbent Trap Monitoring System	4.B.1, 4.B.3 & 4.B.4	33.1-15-22-03, Subpart 5U
		HCl	Emissions Test or SO_2 CEMS	4.B.1 & 4.B.12	33.1-15-22-03, Subpart 5U
		Opacity	COMS	4.B.1, 4.B.2, 4.B.3 & 4.B.4	33.1-15-14-06.5.a(3)(a), 33.1-15-12-03, Subpart D & 33.1-15-21
		Flow	Flow Monitor	4.B.1, 4.B.3 & 4.B.4	33.1-15-12-02, Subpart D & 33.1-15-21

Emission Unit Description	EP	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Combustion Engineering boiler	2	PM/ PM (filterable)	O&M/(CAM) & Emissions Test	4.B.1, 4.B.7, 4.B.8 & 4.B.11	33.1-15-12-02 33.1-15-14-06.5.a(3)(a), 33.1-15-21 & 33.1-15-22-03, Subpart 5U
		SO_2	O&M/CEMS	4.B.1, 4.B.3, 4.B.4 & 4.B.7	33.1-15-12-02, Subpart D & 33.1-15-21
		NO_x	O&M/CEMS	4.B.1, 4.B.3, 4.B.4, 4.B.7, 4.B.13 & 4.B.14	33.1-15-14-06.5.a(3)(a), 33.1-15-21 & 40 CFR 52
		CO_2	CEMS	4.B.1, 4.B.3 & 4.B.4	33.1-15-12-02, Subpart D & 33.1-15-21
		Hg	CEMS or Sorbent Trap Monitoring System	4.B.1, 4.B.3 & 4.B.4	33.1-15-22-03, Subpart 5U
		HCl	Emissions Test or SO_2 CEMS	4.B.1 & 4.B.12	33.1-15-22-03, Subpart 5U
		Opacity	COMS	4.B.1, 4.B.2, 4.B.3 & 4.B.4	33.1-15-14-06.5.a(3)(a), 33.1-15-12-02, Subpart D & 33.1-15-21
		Flow	Flow Monitor	4.B.1, 4.B.3 & 4.B.4	33.1-15-12-02, Subpart D & 33.1-15-21
Zurn Energy auxiliary boiler	3	SO_2	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		NO_x	Emissions Test	4.B.6	33.1-15-14-06.5.a(3)(a)
		Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		Operating Hours	Recordkeeping	4.B.10	33.1-15-14-06.5.a(3)(a)
Diesel engine	5	Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
		Operating Hours	Recordkeeping	Cond.1.A Footnote A & 4.B.10	33.1-15-12-02, Subpart 4I & 33.1-15-22-03, Subpart 4Z
Natural gas-fired heater	6	Opacity	Recordkeeping	4.B.5	33.1-15-14-06.5.a(3)(a)
One coal handling system with emissions from the following areas:					
South row silos	M1	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
North row silos	M2	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10

Emission Unit Description	EP	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
South row transfer tower	M3	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Plant transfer tower	M4	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Plant conveyor loading chute	M5	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Stackout conveyor loading chute	M6	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Emergency stackout building	M7	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Unit 2 south row coal silos	M8	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Unit 2 north row coal silos	M9	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Unit 2 south row transfer tower	M10	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Unit 1 north row transfer tower	M11	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Dry SO_2 scrubber raw materials handling with emissions from the following areas:					
Unit 1 scrubber lime day tank	M12	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Lime unloading building	M13	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Lime silo	M14	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Unit 2 scrubber lime day tank	M15	PM/Opacity	CAM	4.B.11	33.1-15-14-06.10
Rail car loadout	F3	PM/Opacity	O&M/Visible Emissions Observations (VEO)	4.B.7 & 4.B.9	33.1-15-14-06.5.a(3)(a)

B. **Monitoring Conditions**:

1) Monitoring shall be in accordance with the following applicable 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. 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 33.1-15-21-09, Monitoring Requirements.

e) NDAC 33.1-15-22-03, Subpart A, §63.8, Monitoring Requirements.

f) 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) For the performance evaluation, 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).

c) 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.

d) 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 each CEMS.

4) When a failure of a CEMS 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 data substitution are considered an acceptable alternative method (except as provided in Condition 4.B.4.a). Timely repair of the emission monitoring system must be made.

a) Data reported to meet the requirements of the NO_x 30-boiler operating day rolling average shall not include data substituted using the missing data substitution procedures of Subpart D of 40 CFR Part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR Part 75.

5) For EU Auxiliary Boiler and Emergency Fire Pump Engine, burning of fuels as outlined in Conditions 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 of fuels as outlined in Conditions 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) An emissions test shall be conducted to measure NO_x emissions when this unit has operated more than the limit use hours indicated in condition 2.C.2)a. The permittee or a designated representative shall conduct an emissions test to measure NO_x emissions, using at a minimum, a portable analyzer with quality assurance procedures equivalent to EPA Test Methods in 40 CFR 60, Appendix A, or quality assurance procedures approved in advance by the Department. A test shall consist of three runs, with each run at least 20 minutes in length.

7) 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 on site and provide the Department with a copy when requested.

8) a) Within one year 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 unit's 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) 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.9)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.

10) 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)].

11) The permittee shall conduct the monitoring, recordkeeping and reporting as required by the applicable subparts of 40 CFR 64. Monitoring of the emission unit shall be conducted in accordance with the applicable Compliance Assurance Monitoring (CAM) Plan in Attachments A, B or C of this permit.

12) 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.

13) For any hour in which fuel is combusted in a unit, Basin Electric shall calculate the hourly average NO_x concentration in lb/MMBtu at the CEMS in accordance with the requirements of 40 CFR Part 75. At the end of each boiler operating day, the owner/operator shall calculate and record a new 30-day rolling average emission rate in lb/MMBtu from the

arithmetic average of all valid hourly emission rates from the CEMS for the current boiler operating day and the previous 29 successive boiler operating days.

14) An hourly average NO_x emission rate in lb/MMBtu is valid only if the minimum number of data points, as specified in 40 CFR Part 75, is acquired by both the NO_x pollutant concentration monitor and the diluent monitor (O_2 or CO_2).

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 (ex: unit load) that existed at the time of sampling or measurement.

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

Monitoring Records

Emission Unit Description	EP	Pollutant/ Parameter	Compliance Monitoring Record
Combustion Engineering boiler	1	PM/ PM (filterable)	O&M Data, CAM Data & Emissions Test Data
		SO_2	O&M Data and CEMS Data
		NO_x	O&M Data and CEMS Data
		CO_2	CEMS Data
		Hg	CEMS Data or Sorbent Trap Monitoring System Data
		HCl	Emission Test Data or SO_2 CEMS Data
		Opacity	COMS Data
		Flow	Flow Monitor Data
Combustion Engineering boiler	2	PM/ PM (filterable)	O&M Data, CAM Data & Emissions Test Data
		SO_2	O&M Data and CEMS Data
		NO_x	O&M Data and CEMS Data
		CO_2	CEMS Data
		Hg	CEMS Data or Sorbent Trap Monitoring System Data
		HCl	Emission Test Data or SO_2 CEMS Data
		Opacity	COMS Data
		Flow	Flow Monitor Data

Emission Unit Description	EP	Pollutant/ Parameter	Compliance Monitoring Record
Zurn Energy auxiliary boiler	3	SO_2	Type of Fuel Usage
		NO_x	Emissions Test Data
		Opacity	Type of Fuel Usage
		Operating Hours	Hours of Operation Data
Diesel engine	5	Opacity	Type of Fuel Usage
		Operating Hours	Hours of Operation Data
Coal handling system with emissions from the following areas:			
South row silos	M1	PM/Opacity	CAM Data
North row silos	M2	PM/Opacity	CAM Data
South row transfer tower	M3	PM/Opacity	CAM Data
Plant transfer tower	M4	PM/Opacity	CAM Data
Plant conveyor loading chute	M5	PM/Opacity	CAM Data
Stackout conveyor loading chute	M6	PM/Opacity	CAM Data
Emergency stackout building	M7	PM/Opacity	CAM Data
Unit 2 south row coal silos	M8	PM/Opacity	CAM Data
Unit 2 north row coal silos	M9	PM/Opacity	CAM Data
Unit 2 south row transfer tower	M10	PM/Opacity	CAM Data
Unit 1 north row transfer tower	M11	PM/Opacity	CAM Data
Dry SO_2 scrubber raw materials handling with emissions from the following areas:			
Unit 1 scrubber lime day tank	M12	PM/Opacity	CAM Data
Lime unloading building	M13	PM/Opacity	CAM Data
Lime silo	M14	PM/Opacity	CAM Data
Unit 2 scrubber lime day tank	M15	PM/Opacity	CAM Data
Rail car loadout	F3	PM/Opacity	O&M/VEO Data

B. In addition to requirements outlined in Condition 5.A, recordkeeping for EU Unit 1, Unit 2, Auxiliary Boiler, Dust Collectors 1A through 1E, 1K, 1H, 2A through 2D, Unit 1 Day Tank, Lime Unloading Building, Lime Silo, Unit 2 Day Tank and Rail Car Loadout 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 and the Acid Rain Program (40 CFR 72 and 40 CFR 75), as applicable:

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

2) NDAC 33.1-15-12-02, Subpart A, §60.7, Notification and Recordkeeping

3) NDAC 33.1-15-12-02, Subpart Y, §60.258, Reporting and Recordkeeping.

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

5) NDAC 33.1-15-21-09, 40 CFR 72 and 40 CFR 75 - Recordkeeping Requirements.

6) NDAC 33.1-15-22-03, Subpart UUUUU, §63.10032 and §63.10033, Notification, Reports and Records.

Applicable Requirements: NDAC 33.1-15-06, NDAC 33.1-15-12, NDAC 33.1-15-14, NDAC 33.1-15-21, NDAC 33.1-15-22, 40 CFR 72, 40 CFR 75

C. Recordkeeping for EU Auxiliary Boiler 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

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. For EUs Unit 1, Unit 2, Dust Collectors 1.A thru 1.E, 1.K, 1.H, 2.A thru 2.D, Unit 1 Day Tank, Lime Unloading Building, Lime Silo, Unit 2 Day Tank and Rail Car Loadout, reporting shall be in accordance with the following requirements of NDAC 33.1-15-06, 33.1-15-12, 33.15-14, 33.1-15-21 and 33.1-15-22 and the Acid Rain Program (40 CFR 72 and 40 CFR 75), as applicable.

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

2) NDAC 33.1-15-12-02, 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 33.1-15-21-09, Reporting and Recordkeeping Requirements.

5) NDAC 33.1-15-22-03, Subpart UUUUU, §63.10030 and §63.10031, Notification, Reports and Records.

6) 40 CFR 75, Subpart F, Reporting Requirements.

7) Quarterly excess emission reports for EU Unit 1 and Unit 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 Unit 1 and Unit 2 outlined in Condition 3. Excess emissions shall be reported for the following:

Parameter	Reporting Period
SO_2 lb/10^6 Btu	3-hour rolling average
SO_2 lb/hr (Unit 1 and Unit 2 combined)	3-hour rolling average
NO_x lb/10^6 Btu	3-hour rolling average
NO_x lb/10^6 Btu	30-day rolling average
NO_x lb/hr (Unit 1 and Unit 2 combined)	3-hour rolling average
Hg lb/10^{12} Btu	30-boiler operating day rolling average
Opacity %	6-minute average

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, 40 CFR 72, 40 CFR 75

B. EU Auxiliary Boiler 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

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.

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. (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:
Antelope Valley Station
ORIS Plant Code 6469
Boiler ID: B1 and B2

This section incorporates the definition of terms in NDAC Chapter 33.1-15-21 by reference.

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 33.1-15-14-06.4 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 Requirements: 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 74, 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 74 and 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 unit's 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:

Boiler ID	NO_x Limitation
B1	0.40 lb/10^6 Btu*
B2	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 excess NO_x emissions.

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met (from 40 CFR 76):

a) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/MMBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and

1] For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan

2] For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.7, the actual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or

b) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.7.

c) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Applicable Requirement: 40 CFR 72.30(c) , 76.7(a)(1), 76.7(a)(2), 76.8(a)(1), 76.9(d), 76.11, 76.13 and NDAC 33.1-15-21-10

2) **Liability**: The owners and operator of unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Applicable Requirement: 40 CFR 77 and NDAC 33.1-14-21-10

3) **Termination**: The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for with the plan is to be terminated.

Applicable Requirement: 40 CFR 72.40(d)

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 Requirements: 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, 74, 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 and NDAC 33.1-15-21-09, NDAC 33.1-15-21-10 and 40 CFR 72, 73, 74, 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 Requirements: NDAC 33.1-15-21-08.1 and NDAC 33.1-15-21-09

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 as provided in NDAC 33.1-15-21-08.1, NDAC 33.1-15-21-09 and 40 CFR 73, 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 circumstances: 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

Title V Permit to Operate No. AOP-28373
Compliance Assurance Monitoring (CAM) Plan
for EU Unit 1 and Unit 2
Particulate Matter Control

EU	EU Description	Air Pollution Control Equipment
Unit 1	6,275 x 10^6 Btu/hr pulverized lignite	Dry Scrubber and Baghouse EP1
Unit 2	6,275 x 10^6 Btu/hr pulverized lignite	Dry Scrubber and Baghouse EP2

ANTELOPE VALLEY STATION
Compliance Assurance Monitoring Plan
SOURCE ID # Unit 1 and Unit 2
January 8, 2019

I. Emission being Controlled: Particulate

A. Emissions Unit: Unit 1 and Unit 2 CE Coal Fired Boilers

Description: Steam Generator
Identification: Unit 1 and Unit 2
Location: Beulah, North Dakota
Control Devices: Baghouse; Dry Scrubber

B. Applicable Regulation, Emission Limit and Monitoring Requirements

Permit Number: AOP-28373
Emission Limit:
Particulate: 20 Percent Opacity, 0.10 lb/10^6 Btu, 210 lb/hr

Monitoring Requirements: Opacity

Opacity	Durag DR-290	Continuous Opacity Monitoring System (COMS)

C. Control Technology

Baghouse, Low NO_x Burners Over-fire Air, Dry Scrubber
The Antelope Valley Station consists of two 454-megawatt pulverized coal fired units. Each unit is controlled by a dry scrubber, a baghouse and post-combustion sorbent injection. Each baghouse consists of two parallel paths that enter a common duct, which discharges, into the stack.

II. Monitoring Methods

A. Compliance Indicators

Compliance will be determined by using the COM monitoring systems values and comparing them to the emission limits set forth in the operating permit. The indicator for any maintenance activity or operational adjustment will be the occurrence of any exceedance of a permitted emission limit and/or the occurrence of a condition as described within this CAM plan. The attached graph shows the relationship between the opacity and the particulate pound per hour emission limit. In order to assure compliance with the pound per hour limit whenever the opacity hourly block average exceeds 9.8 percent, the plant will be required to take the necessary steps to return the unit's opacity level below the 9.8 percent. This will include operational changes, isolating the appropriate sections of the baghouse and/or reducing generation. During normal operations, a one-hour block average exceeding 9.8 percent opacity is considered to be an excursion relative to the

particulate limit of 210 pounds per hour. A three-hour block average exceeding 9.8 percent opacity is considered to be an exceedance of the particulate limit for one hour. Particulate excursions and exceedances are reported in accordance with Section IV of the CAM Plan. Opacity data for potential particulate limit excursions or exceedances during startup, shutdown and malfunctions are reported in quarterly excess emissions reports. The discharge from each portion of the baghouse has an opacity monitor located in the duct prior to the common discharge duct (see attached diagram for monitor position). These opacity monitors are used as indicators for maintenance activities.

B. Monitoring Frequency

The unit is monitored continuously, and the averaging period is an hourly block opacity average. Also, if any excess emissions are detected the plant worker will notify the appropriate personnel immediately to have the control device repaired or to determine if operational adjustments are necessary. The monitoring data record will be stored in the Environmental Coordinator's office.

C. QA/QC (Quality Assurance and Quality Control) Plan

The QA/QC plan for the COM systems was submitted to the State and EPA during the initial startup period, approved January 1995. This QA/QC program is strictly followed. All the instrument technicians have been trained in accordance with the systems, rules and regulations. The system is monitored for unit compliance and monitor availability 24 hours a day 365 days per year. If a monitoring device fails personnel are called immediately to repair the device. After any monitor repair is complete all the necessary QA/QC checks are performed to ensure proper operation. The COM system is checked every three years using certified test filters.

III. Justification for Selected Monitoring Methods

A. The monitoring systems are the latest technology and are environmentally protected in an air condition enclosure which houses only CEM and COM associated hardware. These monitors have been in service since the issuing of the Title V operating permit. All the records for the maintenance and the monitored data are on file in the Environmental Coordinator's office. The monitors have historically performed extremely well with very high availability. There have not been any trends of increases in emissions nor has there been any serious extended problems with compliance. The approach which will be used in assuring compliance with particulate is based on the baghouse configuration. There are two sections on each baghouse that discharge into a common outlet duct prior to being discharged out the stack. An opacity monitor is located at the discharge of each section. They are used to monitor the operation of the individual sections. The opacity monitor that is used for regulatory compliance is located in the stack at the 300-foot level. The primary source of increases in opacity is due to bag leakage in the individual compartments. The baghouse operation allows the isolation of any of 14 compartments in each section of the baghouse. By using the opacity monitors on each individual section, a problem can be detected, and corrective action can be taken long before any indication would appear at the stack opacity monitor. Therefore, the methods that are described in this CAM plan should be very effective in keeping this unit in compliance with all the permit requirements listed in the Title V operating permit.

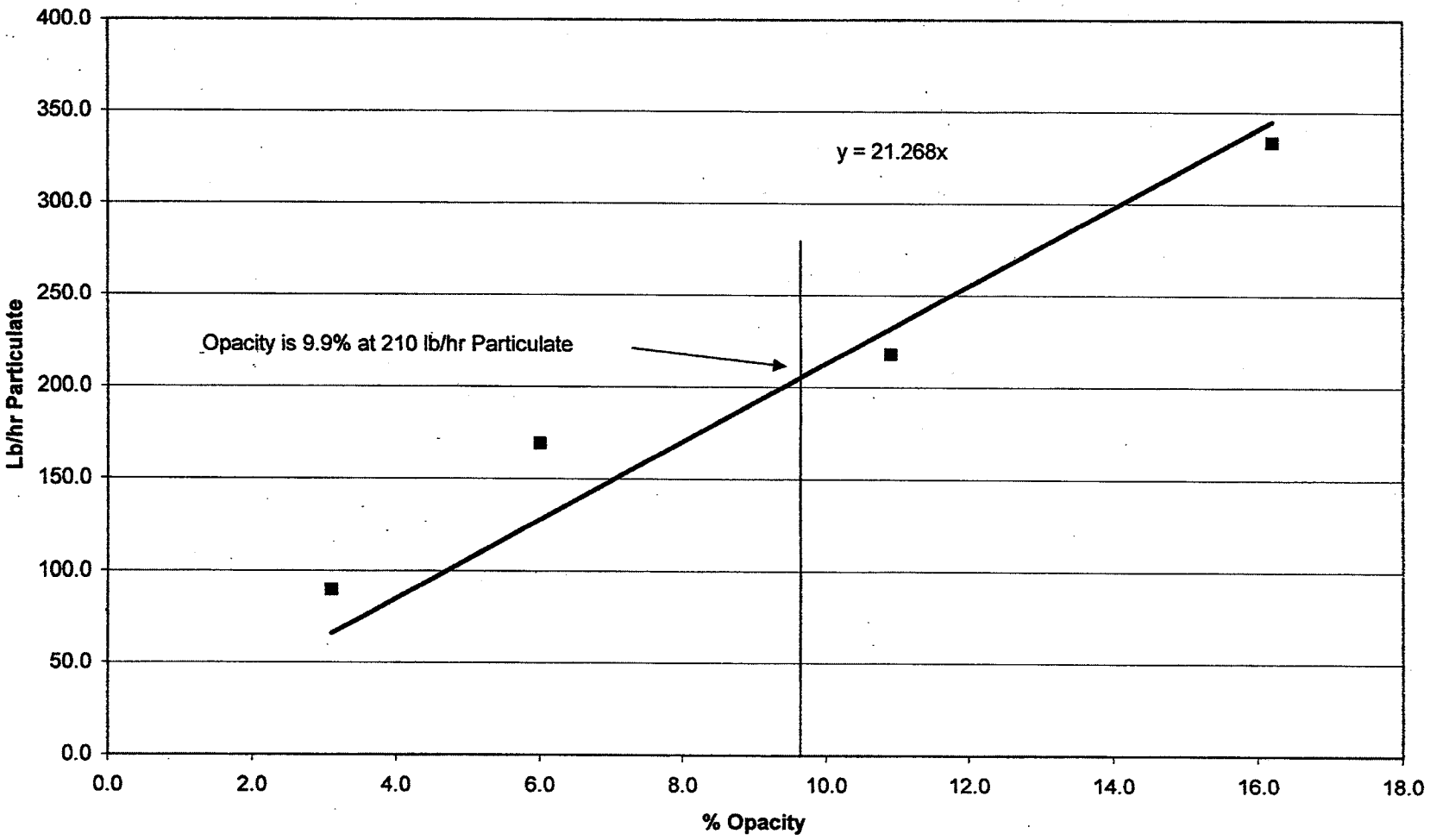
B. The rationale for the selection of the performance indicator is based on the operating principles of the control devices and the latest in technology in monitoring systems. Any reduction in COM monitor availability or increase in excess emissions will indicate a reduction of performance by the control device and will therefore be used as the indicator to correct the condition.

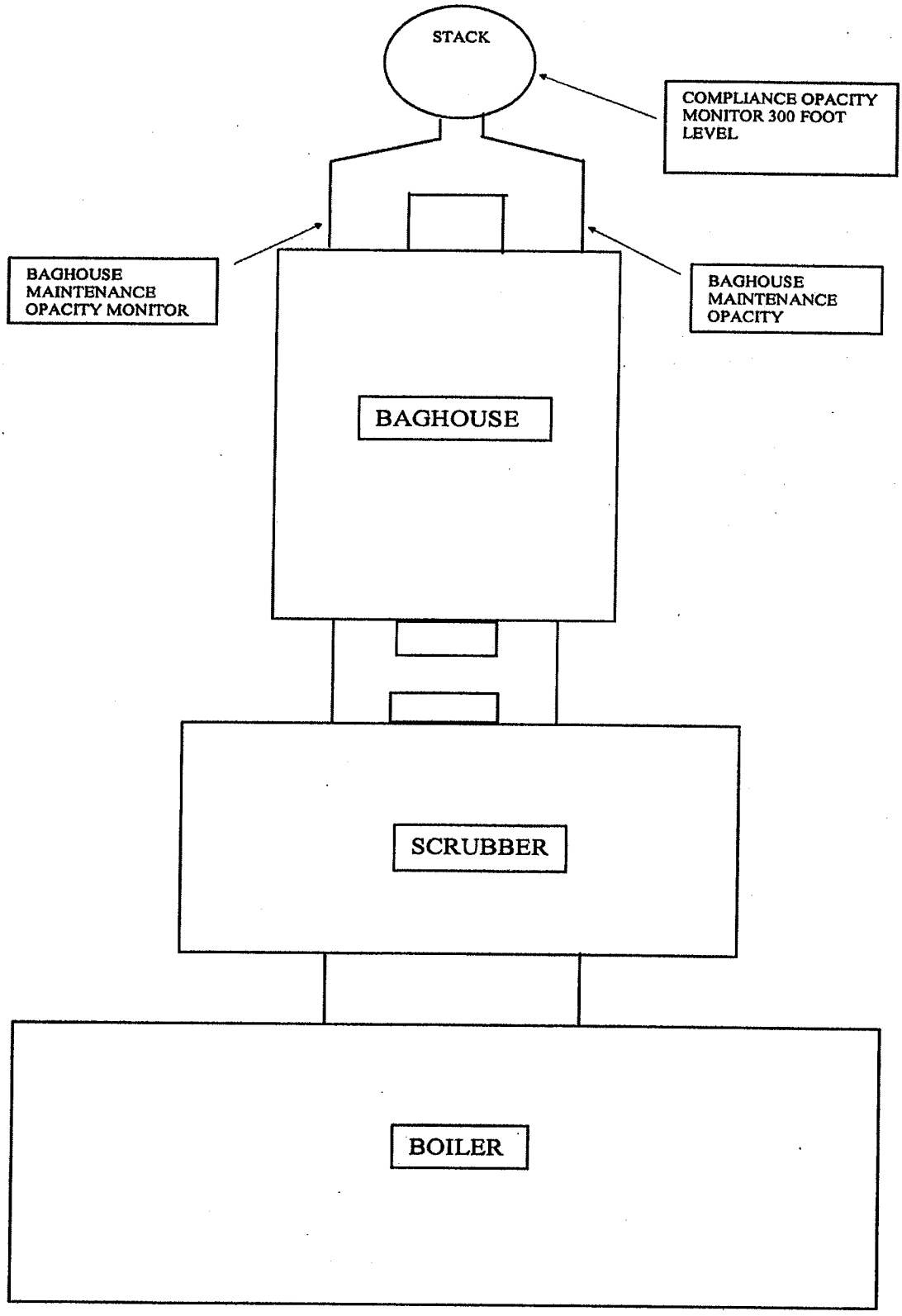
IV. Record Keeping and Reporting Methods

A. All maintenance records monitored data and QA/QC activity will be stored in the Environmental Coordinator's office and available for inspection. These records will include the appropriate identification of the device, description of maintenance activity, date and the person providing the service.

B. A report to the Division of Air Quality will be prepared quarterly, and every 6 months to comply with the semi-annual and annual reporting structure.

Antelope Valley Station Unit 1
2003 Particulate Matter Emission Study
Lb/hr Basis




STACK
COMPLIANCE OPACITY MONITOR 300 FOOT LEVEL
BAGHOUSE MAINTENANCE OPACITY MONITOR
BAGHOUSE MAINTENANCE OPACITY
BAGHOUSE
SCRUBBER
BOILER

Attachment B

Title V Permit to Operate No. AOP-28373
Compliance Assurance Monitoring (CAM) Plan
for EU Dust Collectors 1A, 1B, 1C,
1D, 1E, 1K, 1H, 2A, 2B, 2C and 2D
Particulate Matter/Opacity Control

EU	EU Description	Air Pollution Control Equipment
Dust Collector 1A	South row silos	Baghouse EP M1
Dust Collector 1B	North row silos	Baghouse EP M2
Dust Collector 1C	South row transfer tower	Baghouse EP M3
Dust Collector 1D	Plant transfer tower	Baghouse EP M4
Dust Collector 1E	Plant conveyor loading chute	Baghouse EP M5
Dust Collector 1K	Stackout conveyor loading chute	Baghouse EP M6
Dust Collector 1H	Emergency stackout building	Baghouse EP M7
Dust Collector 2A	Unit 2 south row coal silos	Baghouse EP M8
Dust Collector 2B	Unit 2 north row coal silos	Baghouse EP M9
Dust Collector 2C	Unit 2 south row transfer tower	Baghouse EP M10
Dust Collector 2D	Unit 1 north row transfer tower	Baghouse EP M11

ANTELOPE VALLEY STATION
Compliance Assurance Monitoring Plan
SOURCE ID # M1 thru M11
May 2, 2009

I. Emission being Controlled: Particulate

A. Emissions Unit: Common to Coal Handling

Description: Fabric Filter Dust Collector

Identification: M1	Location: South Row of Silos 1A	PM Emission Limit: 1.97 lb/hr
Identification: M2	Location: North Row of Silos 1B	PM Emission Limit: 1.97 lb/hr
Identification: M3	Location: Transfer Tower 1C	PM Emission Limit: 1.89 lb/hr
Identification: M4	Location: Plant Transfer Tower 1D	PM Emission Limit: 2.83 lb/hr
Identification: M5	Location: Plant Conveyor Chute 1E	PM Emission Limit: 3.26 lb/hr
Identification: M6	Location: Stack out Chute 1K	PM Emission Limit: 3.26 lb/hr
Identification: M7	Location: E. Stack out building 1H	PM Emission Limit: 2.23 lb/hr
Identification: M8	Location: North Row of Silos 2A	PM Emission Limit: 1.97 lb/hr
Identification: M9	Location: North Row of Silos 2B	PM Emission Limit: 1.97 lb/hr
Identification: M10	Location: Transfer Tower 2C	PM Emission Limit: 1.89 lb/hr
Identification: M11	Location: North Transfer Tower 2D	PM Emission Limit: 1.89 lb/hr

B. Applicable Regulation, Emission Limit and Monitoring Requirements

Permit Number: AOP-28373
PM Emission Limit Indicator: 20 Percent Opacity
Monitoring Requirements: Visible emissions, periodic monitoring (Method 9 if required).

C. Control Technology

Bag house operated under negative pressure.

II. Monitoring Methods

A. Compliance Indicators

PM compliance will be determined by visible emissions. The indicator for any maintenance activity will be the occurrence of any visible emissions.

B. Monitoring Frequency

Visible emissions observations will be conducted daily by plant workers. If any emissions are detected the plant worker will notify the appropriate maintenance personnel to have the control device repaired. An Environmental Coordinator, who is a certified Method 9 reader will provide weekly observation and record of the device. This record will be stored in the Environmental Coordinator's office.

C. QA/QC (Quality Assurance and Quality Control) Plan

The QA/QC plan for the control device will follow the manufacturer's recommendations for routine maintenance and checks. Anytime any device has maintenance performed outside the routine QA/QC plan a Method 9 test will be performed immediately after putting the control device back in service.

D. If the device has two excursions within one six months reporting period the state will be notified and the control device will be shut down until the problem is positively identified and corrected.

III. Justification for Selected Monitoring Methods

A. The fabric filter baghouse has been monitored using visual monitoring since the issuing of the Title V operating permit. All the records for the maintenance and the monitoring are on file in the Environmental Coordinator's office. There has not been any indication of emission problems with this control device. There have not been any trends of increases in emissions nor has there been any serious maintenance problems. Therefore, the methods that are described in this CAM plan have proven to be very effective in keeping this unit in compliance with all the permit requirements listed in the Title V operating permit.

B. Visible emissions was selected as the performance indicator. The rationale for the selection of the performance indicator is based on the operating principles of the bag house and the need to comply with the particulate emission standard. Any increase in emission will indicate a reduction of performance by the control device and will therefore be used as the indicator.

IV. Record Keeping and Reporting Methods

A. All maintenance records will be stored in the Environmental Coordinator's office and available for inspection. These records will include the appropriate identification of the device, description of maintenance activity, date and the person providing the service.

B. The weekly visual observation results will be recorded and stored in the Environmental Coordinator's office.

C. A report to the North Dakota Environmental Quality Department will be prepared every 6 months to comply with the semi-annual and annual reporting structure.

Attachment C
Title V Permit to Operate No. AOP-28373
Compliance Assurance Monitoring (CAM) Plan
for EU Unit 1 Day Tank, Unloading Building,
Lime Silo and Unit 2 Day Tank
Particulate Matter/Opacity Control

EU	EU Description	Air Pollution Control Equipment
Unit 1 Day Tank	Unit 1 scrubber lime day tank	Baghouse EP M12
Lime Unloading Building	Lime unloading building	Baghouse EP M13
Lime Silo	Lime silo	Baghouse EP M14
Unit 2 Day Tank	Unit 2 scrubber lime day tank	Baghouse EP M15

ANTELOPE VALLEY STATION
Compliance Assurance Monitoring Plan
SOURCE ID # M12 thru M15
May 2, 2009

I. Emission being Controlled: Particulate

A. Emissions Unit: Common to Dry Scrubber

Description: Fabric Filter Dust Collector

Identification: M12	Location: Unit 1Lime Day Tank	PM Emission Limit: 0.21 lb/hr
Identification: M13	Location: Lime Unloading Building	PM Emission Limit: 0.58 lb/hr
Identification: M14	Location: Lime Silo	PM Emission Limit: 0.42 lb/hr
Identification: M15	Location: Unit 2 Lime Day Tank	PM Emission Limit: 0.21 lb/hr

B. Applicable Regulation, Emission Limit and Monitoring Requirements

Permit Number: AOP-28373
PM Emission Limit Indicator: 20 Percent Opacity
Monitoring Requirements: Visible emissions, periodic monitoring (Method 9 if required).

C. Control Technology

Bag house operated under negative pressure.

II. Monitoring Methods

A. Compliance Indicators

PM compliance will be determined by visible emissions. The indicator for any maintenance activity will be the occurrence of any visible emissions.

B. Monitoring Frequency

Visible emissions observations will be conducted daily by plant workers. If any emissions are detected the plant worker will notify the appropriate maintenance personnel to have the control device repaired. An Environmental Coordinator, who is a certified Method 9 reader will provide weekly observation and record of the device. This record will be stored in the Environmental Coordinator's office.

C. QA/QC (Quality Assurance and Quality Control) Plan

The QA/QC plan for the control device will follow the manufacturer's recommendations for routine maintenance and checks. Anytime any device has maintenance performed outside the routine QA/QC plan a Method 9 test will be performed immediately after putting the control device back in service.

D. If the device has two excursions within one six months reporting period, the State will be notified, and the control device will be shut down until the problem is positively identified and corrected.

III. Justification for Selected Monitoring Methods

A. The fabric filter bag house has been monitored using visual monitoring since the issuing of the Title V operating permit. All the records for the maintenance and the monitoring are on file in the Environmental Coordinator's office. There has not been any indication of emission problems with this control device. There have not been any trends of increases in emissions nor has there been any serious maintenance problems. Therefore, the methods that are described in this CAM plan have proven to be very effective in keeping this unit in compliance with all the permit requirements listed in the Title V operating permit.

B. Visible emissions was selected as the performance indicator. The rationale for the selection of the performance indicator is based on the operating principles of the bag house and the need to comply with the particulate emission standard. Any increase in emission will indicate a reduction of performance by the control device and will therefore be used as the indicator.

IV. Record Keeping and Reporting Methods

A. All maintenance records will be stored in the Environmental Coordinator's office and available for inspection. These records will include the appropriate identification of the device, description of maintenance activity, date and the person providing the service.

B. The weekly observation results will be recorded and stored in the Environmental Coordinator's office.

C. A report to the North Dakota Environmental Quality Department will be prepared every 6 months to comply with the semi-annual and annual reporting structure.

Basin Electric Power Cooperative (BEPC)
Antelope Valley Station
Title V Permit to Operate No. AOP-28373 v6.0
(Previously T5-F86003)
Statement of Basis
(1/3/24)

Facility Background: The Antelope Valley Station is a lignite-fired electrical power generating facility consisting of two units. Each unit includes one Combustion Engineering tangentially fired, wet bottom, pulverized coal boiler with a nominal rated heat input capacity of 6,275 x 10^6 Btu/hr (435 MWe). Pollution control for each boiler consists of a Joy Manufacturing Company, Western Precipitation Division and A/S Niro Atomizer flue gas desulfurization (FGD) system. Each FGD system consists of five parallel spray-dryer reactors in series with two parallel fabric filter baghouses. Each baghouse has 14 compartments for a total of 28 compartments. Dry scrubbing is achieved with a lime and fly ash slurry which combines with flue gas sulfur dioxide to precipitate calcium sulfate. The flue gas from each boiler is emitted through a circular stack approximately 600 feet above grade.

A Permit to Construct (PTC) for both units was issued on February 22, 1978. After several revisions to the PTC, Unit 1 began operations on May 24, 1983, followed by a start date of October 29, 1985 for Unit 2. Permit to Operate (PTO) No. F86003 was first issued for Unit 1 on February 3, 1986 and amended on October 11, 1988 to include Unit 2.

Chronology (not all-inclusive):

PTC, October 25, 1990, construction of a coal rail loadout facility at the plant.

January 14, 1992, PTO F86003, Renewal No. 1

February 1992, PTO revision for burning of tar oil as a supplementary fuel in the boilers.

PTC, December 1992, modification to the coal rail loadout facility.

February 24, 1995, PTO No. F86003, Renewal No. 2; included revisions regarding the modifications made to the coal rail loadout facility.

December 19, 1997, Phase II Acid Rain Permit No. T4-F86003 issued.

July 27, 1998, initial Title V PTO No. T5-F86003 issued and Phase II Acid Rain Permit incorporated into the Title V PTO as Phase II Acid Rain Provisions.

PTO AOP-28373 v2.0 (T5-F86003, Renewal No. 1), issued May 25, 2004.

Amended Title V (Revision No. 1) to include revised Compliance Assurance Monitoring (CAM) in May of 2006.

PTO AOP-28373 v3.0 (T5-F86003 Renewal No. 2, Revision No. 0) was issued August 27, 2009,

and AOP-28373 v4.0 (T5-F86003 Renewal No. 3, Revision No. 0) was issued June 6, 2014.

January 27, 2015, AOP-28373 v4.1 (PTO T5-F86003 Renewal No. 3, Revision No. 1) was issued with administrative amendments.

AOP-28373 v5.0 (T5-F86003 Renewal No. 4, Revision No. 0) issued June 26, 2019; included air pollution control updates for EU Unit 1 and Unit 2, insignificant unit updates and the addition of applicable subparts 40 CFR 63, Subparts DDDDD and UUUUU.

Current Action: On October 31, 2023, the Department received a timely permit application through CERIS-ND from BEPC for renewal of the Antelope Valley Station Title V Permit No. AOP-28373. The draft, renewal permit changes are administrative in nature and include, but are not limited to, updated insignificant/fugitive emission sources, updated standard text and formatting and updated applicable requirements information.

The Department proposes to issue Title V Permit to Operate No. AOP-28373 v6.0 after the required 30-day public comment period and subsequent 45-day EPA review period. This statement of basis summarizes the relevant information considered during this renewal of the Title V permit. The legal basis for each permit condition is stated in the draft permit under the heading "Applicable Requirement."

Applicable Programs/As-Needed Topics:

1. **Title V.** The facility 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 Hazardous Air Pollutant (HAP) emissions (hydrogen chloride and hydrogen fluoride) above 10 tons per year.

2. **New Source Performance Standards (NSPS).** The following NDAC 33.1-15-12-03 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 Unit 1 and Unit 2) because they were constructed after August 17, 1971 (construction started in 1978), and they have a heat input rate greater than 250 million Btu per hour (actual 6,275 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 Dust Collectors 1A, 1B, 1C, 1D, 1E, 1K, 1H, 2A, 2B, 2C, 2D and the Rail Car Coal Loadout.

   Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (EU Emergency Fire Pump Engine).

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 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 Emergency Fire Pump Engine).

   Subpart DDDDD, Industrial, Commercial and Institutional Boilers and Process Heaters applies to the auxiliary boiler (EU Auxiliary Boiler) because it is a natural gas-fired, industrial boiler located at a major source of hazardous air pollutants. The auxiliary boiler is considered a *limited-use* boiler under this subpart because the draft renewal permit limits the boiler to no more than 876 hours per calendar year for 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 (EU Unit 1 and Unit 2).

5. **Acid Rain.** NDAC 33.1-15-21 and 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 52.21) 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 permit that increase potential emissions by a PSD-significant amount. Therefore, this permit is not subject to PSD review.

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

8. **Gap Filling.** Although the permit does contain gap filling for testing, monitoring or recordkeeping not otherwise required by rule, this draft renewal 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.** Not applicable because no streamlining is involved with this draft permit.

10. **Compliance Assurance Monitoring (CAM).** CAM applies to the dry scrubbers and baghouses for Unit 1 and 2 (Emission Point [EP] 1 and EP 2), the baghouses for the dust collectors (EP M1-M11), and the baghouses for the Unit 1 day tank, lime unloading building, lime silo, and Unit 2 day tank (EP M12-M15).

11. **Permit Shield.** This permit contains a permit shield with respect to the Acid Rain program.

12. **New Conditions/Limits.** There are no new conditions or limits in this draft permit. Specific changes in the draft are addressed in the "Permit Changes by Section" discussed below.

13. **40 CFR 98 - Mandatory Greenhouse Gas Reporting.** This rule requires sources above certain emission 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 in this Draft Renewal:

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 has been updated to accommodate the Air Quality database (CERIS-ND). These changes may not be specifically addressed below.

Cover: Permit Number, permit renewal, permit revision and expiration date were all updated.

Table of Contents: Page numbers and condition headings were updated as necessary.

1. **Emission Unit Identification**: Applicable subparts were added to the table for units subject to subpart requirements. The emergency fire pump information was updated (like-kind engine replacement information provided by BEPC 12/20/23) and an insignificant unit (EU Natural Gas Heater 2) was added. The CEMS/COMS/CMS requirements were updated.

2. **Applicable Standards, Restrictions and Miscellaneous Conditions** (previously Condition No. 3): The fuel restrictions were added to this section and the formatting was updated.

3. **Emission Unit Limits**: Administrative updates were made in the table and associated footers. Condition 3.B for the fugitive emissions opacity limit was added.

4. **Monitoring Requirements and Conditions** (previously Condition No. 5): Condition Number references were updated in the table. The monitoring text Condition Number references were updated, and the formatting was revised. The hours monitoring for the emergency engine and the visual emissions monitoring was updated to ND standard text.

5. **Recordkeeping Requirements** (previously Condition No. 6): Condition Number references were updated in the text. Applicable standard references were updated.

6. **Reporting** (previously Condition No. 7): Conditions 6.C, D and F were revised to reflect the current ND reporting conditions.

7. **Facility Wide Operating Conditions** (previously Condition No. 8): 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** (previously Condition No. 9): Condition 8.E was revised to reflect the current ND general conditions.

9. **Phase II Acid Rain Provisions** (previously Condition No. 10): No changes.

10. **State Enforceable Only Conditions (not Federally enforceable)** (previously Condition No. 11): No changes.

Attachment A – Compliance Assurance (CAM) Plan for Units 1 and 2: Administrative updates were made.

Attachment B – CAM Plan for Dust Collectors 1A, 1B, 1C, 1D, 1E, 1K, 1H, 2A, 2B, 2C and 2D: Administrative updates were made.

Attachment C – CAM Plan for Unit 1 Day Tank, Lime Unloading Building, Lime Silo and Unit 2 Day Tank: Administrative updates were made.

Comments/Recommendations: It is recommended that Title V Permit to Operate No. AOP-28373 v6.0 be processed and considered for issuance following a 30-day public comment period and a subsequent 45-day EPA review period.