

Permit #: 28.1121-02

Effective Date: September 30, 2013

Expiration Date: December 19, 2010

The seal of the State of South Dakota is a circular emblem with a serrated outer edge. It features a central landscape scene with a river, a bridge, and a windmill. Above the scene is a banner with the motto "UNDER GOD THE PEOPLE RULE". The words "STATE OF SOUTH DAKOTA" are written in an arc across the top, and "GREAT SEAL" is written in an arc across the bottom. The year "1889" is prominently displayed at the bottom center of the seal.

SOUTH DAKOTA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
TITLE V AIR QUALITY OPERATING PERMIT

A handwritten signature in black ink, appearing to read "S. M. Pirner".

Steven M. Pirner, Secretary

Department of Environment and Natural Resources

Under the South Dakota Air Pollution Control Regulations

Pursuant to Chapter 34A-1-21 of the South Dakota Codified Laws and the Air Pollution Control Regulations of the State of South Dakota and in reliance on statements made by the owner designated below, a permit to operate is hereby issued by the Secretary of the Department of Environment and Natural Resources. This permit authorizes such owner to operate the unit(s) listed in Table #1 under the listed conditions.

A. Owner

1. Company Name and Mailing Address

GCC Dacotah
PO Box 360
Rapid City, South Dakota 57709

2. Actual Source Location if Different from Above

501 North St. Onge
Rapid City, South Dakota 57702

3. Permit Contact

Jim Anderson, Environmental Specialist
605-721-7033

4. Facility Contact

Same as above

5. Responsible Official

Steve Post
Plant Manager
605-721-7041

B. Permit Revisions or Modifications

- November 6, 2006 – Permit modification for the addition of an air separator (baghouse) to the kiln #6 feed system; and
- December 5, 2006 – Minor permit amendment for the addition of four baghouses.
- August 7, 2008 – Minor amendment to include fly ash storage and handling to the existing silo (Unit #21) and truck load out (Unit #35).
- October 10, 2008 – Minor amendment to include fly ash storage and handling to the existing silo (Unit #19).

- December 1, 2008 – Minor amendment to correct the operating descriptions and applicable limits of the Kiln 4 and Kiln 5 clinker coolers, and address an EPA order signed June 15, 2007.
- September 30, 2013 – Modification to add two new baghouses to capture and control particulate matter emissions. The new baghouses are associated with plans to begin the sale of cement kiln dust.

C. Type of Operation

GCC Dacotah operates a portland cement manufacturing facility located in Rapid City, South Dakota. The facility operates two wet process kilns and one dry process kiln with a total clinker production capacity of one million tons per year. The various plant operations include: quarrying, crushing, raw material transfer and storage, calcining in rotary kilns, clinker transfer and storage, finish mills, cement transfer and storage and product shipping by rail or truck.

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1.0 STANDARD CONDITIONS

1.1 Construction and operation of source. In accordance with Administrative Rules of South Dakota (ARSD) 74:36:09:02, as referenced to 74:36:05:16.01(8), the owner or operator shall construct and operate the units, controls, and processes as described in Table #1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated December 18, 2002, August 15, 2003, May 3, 2006, July 24, 2006, March 17, 2008, July 11, 2008, August 18, 2008 and January 28, 2013, unless modified by the conditions of this permit. The control equipment shall be operated in manner that achieves compliance with the conditions of this permit at all times. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted.

Table #1 – Description of Permitted Units, Operations, and Processes

Unit		Description of Process	Maximum Operating Rate	Control Device	Maximum Flow Rate ¹
1	EDC101	Primary and secondary crushers	1,000 tons per hour	Baghouse	7,500 acfm
2	EDC102	Screen	1,000 tons per hour	Baghouse	7,500 acfm
3	EDC402	Rotary kiln #4 fired on coal or natural gas	550 tons clinker per day	Electrostatic Precipitator	-
4	EDC403	Rotary kiln #5 fired on coal or natural gas	550 tons clinker per day	Electrostatic Precipitator	-
5a	EDC416	Kiln #4 and #5 clinker coolers	1,100 tons clinker per day	Baghouse	-
5b		Kiln #4 and #5 clinker coolers		Baghouse	-
6	EDC652	Raw material storage building to two kiln feed storage silos	180 tons per hour	Baghouse	7,500 acfm
6a	EDC501	Rock silo to Loesche Mill	180 tons per hour	Baghouse	10,000 acfm
6b	EDC602	Kiln feed storage silo to kiln #6	160 tons per hour	Baghouse	4,100 acfm
7	EDC420	Penthouse storage #1 (south)	1100 tons clinker per day	Baghouse	-
7a	EDC421	Penthouse storage #1 (south)	1100 tons clinker per day	Baghouse	-
7b	EDC710	Clinker shed to finish mills	500 tons per hour	Baghouse	15,000 acfm
7c	EDC706	Raw Shed to Loesche Mill	40 tons per hour	Baghouse	1,500 acfm
7d	EDC701	Raw material transferred from belt conveyor 107 to belt conveyor 108	800 tons per hour	Baghouse	2,000 acfm
7e	EDC705	Gypsum raw shed to old clinker building	350 tons per hour	Baghouse	2,000 acfm
7f	EDC703	Raw shed to Loesche Mill	40 tons per hour	Baghouse	1,500 acfm
7g	EDC704	Gypsum raw shed to old clinker building	350 tons per hour	Baghouse	2,000 acfm
8	EDC614	Penthouse storage #2 (north)	2,250 tons clinker per day	Baghouse	5,000 acfm

Unit		Description of Process	Maximum Operating Rate	Control Device	Maximum Flow Rate ¹
8a	EDC627	Penthouse storage #2 (north)	2,250 tons clinker per day	Baghouse	3,500 acfm
8b	EDC613	Penthouse storage #2 (north)	2,250 tons clinker per day	Baghouse	5,000 acfm
8c	EDC707	Rock silo discharge	1,000 tons per hour	Baghouse	5,000 acfm
9	EDC619	Rotary kiln #6 fired on coal or natural gas	2,250 tons clinker per day	Preheater/ Precalculator/ Baghouse	240,000 acfm
10	EDC615	Dry process clinker cooler	2,250 tons clinker per day	Baghouse	153,000 acfm
11	EDC623	Alkali bypass and alkali waste to waste bin transfer system	2,250 tons clinker per day	Baghouse	60,000 acfm
12	EDC731	Finish mill #3	35 tons per hour	Baghouse	15,000 acfm
13	EDC741	Finish mill #4	40 tons per hour	Baghouse	15,000 acfm
14	EDC751	Finish mill #5	45 tons per hour	Baghouse	15,000 acfm
15	EDC761	Finish mill #6	45 tons per hour	Baghouse	15,000 acfm
16	EDC771	Finish mill #7 (mill sweep)	85 tons per hour	Baghouse	28,000 acfm
16a	EDC772	Finish mill #7 (mill separator)	85 tons per hour	Baghouse	80,000 acfm
16b	EDC708	Finish mill #7 (transfer)	500 tons per hour	Baghouse	4,500 acfm
16c	EDC709	Finish mill #7 (transfer)	500 tons per hour	Baghouse	8,000 acfm
16d	EDC713	Clinker transfer system	500 tons per hour	Baghouse	10,000 acfm
17	EDC804	Bulk storage silos	125 tons per hour	Baghouse	4,000 acfm
18	EDC821	Bulk storage silos	125 tons per hour	Baghouse	4,000 acfm
19	EDC805	Bulk cement or fly ash storage silos	125 tons per hour	Baghouse	4,000 acfm
20	EDC832	Bulk storage silos	125 tons per hour	Baghouse	10,000 acfm
21	EDC824	Bulk cement or fly ash storage silos	200 tons per hour	Baghouse	5,000 acfm
24	EDC827	Rail storage silos	125 tons per hour	Baghouse	4,000 acfm
25	EDC828	Rail storage silos	125 tons per hour	Baghouse	4,000 acfm
26	EDC834	Rail storage silos	125 tons per hour	Baghouse	10,000 acfm
27	EDC853	Bulk rail load outs	500 tons per hour	Baghouse	1,688 acfm
28	EDC854	Bulk rail load outs	500 tons per hour	Baghouse	6,416 acfm
35	EDC825	East bulk cement or fly ash truck load out	500 tons per hour	Baghouse	3,000 acfm
36	EDC826	West bulk truck load out	500 tons per hour	Baghouse	4,000 acfm
37	EDC801	Cement bagging	114 tons per hour	Baghouse	5,900 acfm
38	EDC802	Cement bagging	114 tons per hour	Baghouse	5,900 acfm
39	EDC803	Cement bagging	114 tons per hour	Baghouse	5,900 acfm
41	ECD628 EDC629	Coal mill	20 tons coal per hour 5.3 MMBtus per hour	Single stage cyclone and two baghouses	42,000 acfm

Unit		Description of Process	Maximum Operating Rate	Control Device	Maximum Flow Rate ¹
			heat input	operated in parallel	
41b	EDC274	Coal stacker top	400 tons per hour	Baghouse	1,300 acfm
41c	EDC275	Coal surge bin top	400 tons per hour	Baghouse	450 acfm
41d	EDC702	Coal tunnel to coal stacker	400 tons per hour	Baghouse	2,000 acfm
41e	EDC276	Coal surge bin top	400 tons per hour	Baghouse	4,000 acfm
41f	EDC277	Coal transfer	400 tons per hour	Baghouse	1,300 acfm
41g	EDC280	Coal bin #4	9 tons per hour	Baghouse	-
41h	EDC279	Coal bin #5	9 tons per hour	Baghouse	-
41i	EDC278	Coal bin #6	400 tons per hour	Baghouse	600 acfm
62b	EDC272 EDC273	Coal – hopper to conveyor	400 tons per hour	Two baghouses operated in parallel	500 acfm per baghouse
63		Air separator – kiln #6 feed system	2,250 tons clinker per day	Baghouse	1906 acfm
64		Belt transfer from kiln #4 and #5, kiln #4 and #5 weigh feeder, and kiln #4 bucket elevator	Not applicable	Baghouse	12,200 acfm
65		Raw material transfer point from secondary crusher to a belt conveyor	Not applicable	Baghouse	2,000 acfm
66		Clinker transfer point from kiln #5 clinker cooler to two bucket elevators	Not applicable	Baghouse	2,500 acfm
67		Clinker transfer point from kiln #4 clinker cooler to pan conveyor	Not applicable	Baghouse	2,500 acfm
68	EDC850	Alkali bypass dust, cement and kiln dust storage silo - Silo 39	500 tons per hour	Baghouse	2,100 acfm
69	EDC851	Alkali bypass dust, cement and kiln dust storage Silo 39, transfer to truck load out	60 tons per hour	Baghouse	1,300 acfm

¹ – “acfm” means actual cubic feet per minute

1.2 Insignificant activities. In accordance with ARSD 74:36:05:12, the owner or operator has identified mobile internal combustion engines, to include engines in autos, trucks, tractors, and locomotives; laboratory equipment used exclusively for chemical or physical analysis; air conditioning or ventilating systems not designed to remove air pollutants from equipment; and routine housekeeping or plant upkeep activities such as painting buildings, re-tarring roofs or the paving of parking lots as insignificant activities. In accordance with ARSD 74:36:05:04.01, the identified activities are considered insignificant activities and exempt from inclusion in this permit.

1.3 Prevention of significant deterioration permit requirements. In accordance with ARSD 74:36:05:16.01(8), (9), and (19), the prevention of significant deterioration air quality permit #28.1101-PSD is fully incorporated by reference throughout this permit, except permit conditions 2.1, 2.2, 2.3, 2.4, 3.4, 3.5, 5.6, and 5.7 of permit #28.1101-PSD. As of the date of issuance of this permit, the owner or operator has complied with permit conditions 2.1, 2.2, 2.3, 2.4, 3.4, 3.5, 5.6, and 5.7 of permit #28.1101-PSD.

1.4 Duty to comply. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(12), the owner or operator shall comply with the conditions of this permit. An owner or operator who knowingly makes a false statement in any record or report or who falsifies, tampers with, or renders inaccurate, any monitoring device or method is in violation of this permit. A violation of any condition in this permit is grounds for enforcement, reopening this permit, permit termination, or denial of a permit renewal application. The owner or operator, in an enforcement action cannot use the defense that it would have been necessary to cease or reduce the permitted activity to maintain compliance. The owner or operator shall provide any information requested by the Secretary to determine compliance or whether cause exists for reopening or terminating this permit. This permit does not waive compliance with federal, state, or local laws and ordinances.

1.5 Property rights or exclusive privileges. In accordance with ARSD 74:36:05:16.01(12), the State's issuance of this permit, adoption of design criteria, and approval of plans and specifications does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the owner's or operator's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The owner or operator is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

1.6 Penalty for violating a permit condition. In accordance with South Dakota Codified Law (SDCL) 34A-1, a violation of a permit condition may subject the owner or operator to civil or criminal prosecution, a state penalty of not more than \$10,000 per day per violation, injunctive action, administrative permit action, and other remedies as provided by law.

1.7 Inspection and entry. In accordance with SDCL 34A-1-41, the owner or operator shall allow the Secretary to:

1. Enter the premises where a regulated activity is located or where pertinent records are stored;
2. Have access to and copy any records that are required under this permit;
3. Inspect operations regulated under this permit; or
4. Sample or monitor any substances or parameters for the purpose of assuring compliance.

1.8 Severability. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(11), any portion of this permit that is void or challenged shall not affect the validity of the remaining permit requirements.

1.9 Permit termination, modification, or revocation. In accordance with SDCL 34A-1-21 and ARSD 74:36:05:46, the Secretary may recommend that the Board of Minerals and Environment terminate, modify, or revoke this permit for violations of SDCL 34A-1 or the federal Clean Air Act or for nonpayment of any outstanding fee or enforcement penalty.

1.10 Records and information available to the public. In accordance with SDCL 34A-1-14, any records, reports, or information obtained by the Secretary or the Board of Minerals and Environment shall be available to the public, except that upon a showing satisfactory to the Board of Minerals and Environment by the owners or operators that the records, reports, or information obtained by the Secretary or the Board of Minerals and Environment regarding processes or production technique are sufficiently unique to affect adversely the competitive position of the owner or operator by revealing trade secrets, the Secretary and Board of Minerals and Environment shall consider the record, report, or information or particular portion thereof confidential. All data relating to air pollution emissions are public records and subject to public disclosure.

1.11 Definition of terms. In accordance with ARSD 74:36:01, the terms and phrases used throughout this permit shall only have the meaning and scope set forth in existing state and federal law and regulations.

1.12 Applicable requirements. In accordance with ARSD 74:36:05, Table #2 lists all applicable requirements.

Table #2 – Applicable Requirements

Permit Condition	Applicable Requirements	Unit #
1.1	Construction and operation of source – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide
1.2	Insignificant activities – ARSD 74:36:05:12	Facility wide
1.3	Prevention of significant deterioration permit requirements – ARSD 74:36:05:16.01(8), (9), and (19)	Units #1, #2, #6, #6a, #6b, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #41, #41b, #41c, #41d, #41e, #41f, #41i, #41j, and #62b
1.4	Duty to comply with operating permit – ARSD 74:36:09:02 and 74:36:05:16.01(12)	Facility wide

Permit Condition	Applicable Requirements	Unit #
1.5	Property rights or exclusive privileges – ARSD 74:36:05:16.01(12)	Facility wide
1.6	Penalty for violating a permit condition – SDCL 34A-1	Facility wide
1.7	Inspection and entry – SDCL 34A-1-41	Facility wide
1.8	Severability – ARSD 74:36:09:02 and 74:36:05:16.01(11)	Facility wide
1.9	Permit termination, modification, or revocation – SDCL 34A-1-21 and ARSD 74:36:05:46	Facility wide
1.10	Records and information available to the public – SDCL 34A-1-14	Facility wide
1.11	Definition of terms – ARSD 74:36:01	Facility wide
1.12	Applicable requirements – ARSD 74:36:05	Facility wide
1.13	Permit Shield - ARSD 74:36:05	Facility wide
1.14	Credible evidence - ARSD 74:36:13:07	Facility wide
2.1	Annual air fee required – ARSD 74:36:05:06.01	Facility wide
2.2	Annual operational report – ARSD 74:37:01:06	Facility wide
2.3	Annual air fee – ARSD 74:37:01:08	Facility wide
3.1	Permit flexibility – ARSD 74:36:05:30	Facility wide
3.2	Administrative permit amendment – ARSD 74:36:05:33	Facility wide
3.3	Minor permit amendment – ARSD 74:36:05:38	Facility wide
3.4	Permit modification – ARSD 74:36:05:39	Facility wide
3.5	Permit revision – ARSD 75:36:05:40	Facility wide
3.6	Testing new fuels or raw materials – ARSD 74:36:11:04	Facility wide
4.1	Permit effective – ARSD 74:36:05:07	Facility wide
4.2	Permit renewal – ARSD 74: 36:05:08	Facility wide
4.3	Permit expiration – ARSD 74:36:05:28	Facility wide
5.1	Record keeping and reporting – ARSD 74:36:09:02 and 74:36:05:16.01(9)	Facility wide
5.2	Signatory requirements – ARSD 74:36:09:02 and 74:36:05:12	Facility wide
5.3	Certification statement – ARSD 74:36:09:02 and 74:36:05:16.01(14)(a)	Facility wide
5.4	Operations and maintenance plan – ARSD 74:36:08:21 and 40 CFR §§ 63.1350(a) and 63.1350(b)	Facility wide
5.5	Startup, shutdown and malfunction plan – ARSD 74:36:08:03 and 40 CFR §§ 63.6(e)(3)	Units #3, #4, #5a, #5b, #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a,

Permit Condition	Applicable Requirements	Unit #
		#16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #63, #64, #66, #67, #68 and #69
5.6	Monitoring log – ARSD 74:36:05:16.01(9)	Facility wide
5.7	Annual records – ARSD 74:36:05:16.01(9)	Facility wide
5.8	Quarterly report – excess air emissions – ARSD 74:36:09:02 and 74:36:05:16.01(9)	Units #9, #11, and #41
5.9	Semiannual excess emissions and monitoring report – ARSD 74:36:08:03, 74:36:08:21, 74:36:09:02, and 74:36:05:16.01(9); and 40 CFR §§ 63.10(e)(3) and §63.1354(b)(8)	Units #3, #4, #5a, #5b, #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #63, #64, #66, #67, #68 and #69
5.10	Annual compliance certification – ARSD 74:36:05:16.01(14)	Facility wide
5.11	Reporting permit violations – ARSD 74:36:05:16.01(9)	Facility wide
5.12	Initial startup notification – ARSD 74:36:05:16.01(9)	Unit #63, #64, #66, and #67
5.13	Recordkeeping requirements for Unit #68 and #69 - ARSD 74:36:08:21, as referenced to 40 CFR § 63.1355	Unit #68 and #69
6.1	Opacity limit – ARSD 74:36:07:16, 74:36:08:21, and 74:36:12:01; and 40 CFR §§ 60.252(a)(2), 60.252(c), 63.1343(b)(2), 63.1345(a)(2), 63.1347, and 63.1348	Units #1, #2, #3, #4, #5a, #5b, #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, #63, #64, #65, #66, #67, #68, and #69
6.3	Opacity exceedances – ARSD 74:36:07:01, 74:36:08:03, and 74:36:12:01; and 40 CFR §§	Units #1, #2, #3, #4, #5a, #5b, #6, #6a, #6b, #7, #7a,

Permit Condition	Applicable Requirements	Unit #
	60.11(c) and 63.7(e)	#7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, #63, #64, #65, #66, #67, #68 and #69
6.4	Best available control technology limits for particulate – ARSD 74:36:09:02 and 40 CFR § 52.21(j)(3)	Units #1, #2, #6, #6a, #6b, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #9, #10, #11, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #41, #41b, #41c, #41d, #41e, #41f, #41i, #62b and #68
6.5	Particulate limit for maximum control technology standard – ARSD 74:36:08:21 and 40 CFR §§ 63.1343(b)(1) and 60.1345(a)(1)	Units #3, #4, #5a, #5b, #9, #10, and #11
6.6	Particulate limit for Unit #41 – ARSD 74:36:07:16 and 40 CFR § 63.252(a)(1)	Unit #41
6.7	Particulate limits – ARSD 74:36:06:03(1)	Units #7, #7a, #40, #41g, #41h, #63, #64, #65, #66, #67 and #69
6.8	Best available control technology limits for kiln #6 system – ARSD 74:36:09:02 and 40 CFR § 52.21(j)(3)	Units #9, #11, and #41
6.9	Sulfur dioxide limits – ARSD 74:36:06:03(2)	Units #3 and #4
6.10	Dioxin and furan limit for wet kilns, dry kiln and alkali bypass – ARSD 74:36:08:21 and 40 CFR § 63.1343(b)(3)	Unit #3, #4, #9, and #11
6.11	Inlet temperature limit for wet kilns, dry kiln and alkali bypass air pollution control device – ARSD 74:36:08:21 and 40 CFR § 63.1344(b)(3)	Unit #3, #4, #9, and #11
6.12	Air emissions exceedances – emergency conditions – ARSD 74:36:09:02 and 74:36:05:16.01(18)	Facility wide

Permit Condition	Applicable Requirements	Unit #
6.13	Circumvention not allowed – ARSD 74:36:05:47.01	Facility wide
6.14	Minimizing emissions – ARSD 74:36:07:01 and 74: 36:08:03 and 40 CFR §§ 60.11(d) and 63.6(3)(1)	Facility wide
7.1	Performance test may be required – ARSD 74:36:11:02	Facility wide
7.2	Test methods and procedures – 40 CFR Part 60, Appendix A; 40 CFR Part 63, Appendix A; and 40 CFR Part 51, Appendix M	Facility wide
7.3	Representative performance test – ARSD 74:36:07:01 and 40 CFR § 60.8(c)	Facility wide
7.4	Submittal of test plan – ARSD 74:36:11:01	Facility wide
7.5	Notification of test – ARSD 74:36:11:03	Facility wide
7.6	Performance test report – ARSD 74:36:11:02, 74:36: 08:21, and ARSD 74:36:05:16.01(9); and 40 CFR § 63.1349(a)	Facility wide
7.7	Particulate testing requirements – ARSD 74:36:08:21 and 40 CFR §§ 63.1349(b), 63.1349(c) and 63.1349(e)	Units #3, #4, #5a, #5b, #9, #10, and #11
7.8	Opacity testing requirements – ARSD 74:36:08:21 and 40 CFR §§ 63.1349(b) and 63.1349(c)	Units #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7f, #7g, #8, #8a, #8b, #8c, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #63, #64, #66, #67, #68 and #69
7.9	Dioxin and furan testing requirements – ARSD 74:36:08:21 and 40 CFR §§ 63.1349(b), 63.1349(d), and 63.1349(e)	Units #3, #4, #9, and #11
7.10	Annual calibration of temperature monitors – ARSD 74:36:07:16, 74:36:07:01, 74:36:08:21; and 40 CFR § 60.253(b), 60.13(b), and 63.1350(f)(6)	Units #3, #4, #9, #11 and #41
7.11	Performance test procedures for Unit #41 – ARSD 74:36:07:16 and 40 CFR § 60.254(b)(1)	Unit #41
7.12	Annual audit of continuous opacity monitors – ARSD 74:36:08:21 and 40 CFR § 63.8(e)	Units #3, #4, #5a, #5b, #9, #10, and #11
7.13	Annual performance test for Unit #11 – ARSD 74:36:11:02	Unit #11
7.14	Initial performance test for Unit #63 – ARSD 74:36:11:02	Unit #63

Permit Condition	Applicable Requirements	Unit #
7.15	Initial compliance requirement for Unit #68 and #69 – opacity - ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1348(a)(2) and 63.1349(b)(2)	Unit #68 and #69
8.1	Monthly monitoring for opacity limits – ARSD 74:36:08:21 and 74:36:13:07; and 40 CFR § 63.1350(a)(4)	Units #1, #2, #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7e, #7f, #7g, #8, #8a, #8b, #8c, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, #63, #64, #65, #66, #67, #68 and #69
8.3	Certified personnel – visible emission tests – ARSD 74:36:13:07	Facility wide
8.4	Continuous emission monitoring systems – ARSD 74:36:13:01	Units #9, #11, and #41
8.5	Continuous opacity monitoring systems – ARSD 74:36:08:21 and 40 CFR § 63.1350(c)	Units #3, #4, #5a, #5b, #9, #10, and #11
8.6	Performance specifications and quality assurance – ARSD 74:36:08:21 and 74:36:13:02; and 40 CFR §§ 63.1350(c)(1), 63.1350(d)(1), and 60.13(a)	Units #3, #4, #5a, #5b, #9, #10, #11, and #41
8.7	Recertification of the continuous emission monitoring system – ARSD 74: 36:13:01 and 74:36:13:02; and 40 CFR § 60.13(c)	Units #9, #11, and #41
8.8	Monitoring data – ARSD 74: 36:13:02	Units #9, #11, and #41
8.9	Continuous temperature monitor for Unit #41 – ARSD 74:36:07:16 and 40 CFR § 60.253(a)	Unit #41
8.10	Annual combustion system inspection – ARSD 74:36:08:21 and 40 CFR § 63.1350(i)	Units #3, #4, and #9
8.11	Continuous temperature monitor for kilns and alkali bypass – ARSD 74:36:08:21 and 40 CFR § 63.1350(f)	Units #3, #4, #9, and #11
8.12	Compliance assurance monitoring – ARSD 74:36:13:08	Units #1 and #2
9.1	Unpaved road controls – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide
9.2	Paved road and parking area controls – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide
9.3	Track out area controls – ARSD 74:36:05:16.01(8)	Facility wide
9.4	Reclamation plan – ARSD 74:36:05:16.01(8)	Facility wide

Permit Condition	Applicable Requirements	Unit #
9.5	Open storage pile control – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide
9.6	Waste pit controls – ARSD 74:36:05:16.01(8)	Facility wide
9.7	Blasting controls – ARSD 74:36:05:16.01(8)	Facility wide
9.8	Opacity limit for fugitive sources – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide
9.9	Opacity readings during a high wind dust alert – ARSD 74:36:09:02 and 74:36:05:16.01(8)	Facility wide

1.13 Permit shield. This permit contains conditions and requirements applicable to GCC Dacotah, including conditions and requirements applicable to the identified individual emissions units. These conditions and requirements are identified in this permit [and generally are referenced in Table #2.] Certain regulations, conditions and requirements have been determined by the Secretary to be not applicable to GCC Dacotah; these are identified in this permit [and generally referenced in Table #2]. Some emission units have no applicable conditions or requirements and are noted by their omission from this Permit [and Table #2], which constitutes an affirmative decision that no applicable conditions or requirements exist for those emission units. [In all cases, any conflict between Table #2 and the requirements and conditions of this permit shall be resolved in favor of the language contained in the permit and against Table #2.]

Compliance with the conditions of this permit shall be deemed to be compliance with any applicable requirements of the South Dakota Air Pollution Control Act (SDCL ch. 34A-1) and the regulations promulgated thereunder (ARSD art. 74:36) which existed as of the date of permit issuance and are identified in this permit [and in Table #2], except that this permit shield: (a) shall not be applicable if the permit is based upon inaccurate, misleading, or incomplete information, or upon mistakes or errors (including typographical), submitted by GCC Dacotah in its application for a Title V air quality permit; or (b) may not be used as a defense if the owner or operator fails to comply with any of the conditions of the permit.

This permit shield shall not alter or affect the following:

1. The provisions of sections 112(r)(9) and 303 of the Clean Air Act (emergency orders), including the authority of the administrator under those sections;
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 applicable requirements of the acid rain program, consistent with section 408(a) of the Clean Air Act; or
4. The ability of the Secretary or the administrator to obtain information from the facility pursuant to section 114 of the Clean Air Act.

1.14 Credible evidence. In accordance with ARSD 74:36:13:07, credible evidence may be used for the purpose of establishing whether the owner or operator has violated or is violation of this permit. Credible evidence is as follows:

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at the source:
 - a. A monitoring method approved for the source pursuant to 40 CFR § 70.6(a)(3) and incorporated in this permit;
 - b. Compliance methods specified in an applicable plan;
2. The following testing, monitoring, or information gathering methods are presumptively credible testing, monitoring, or information-gathering methods:
 - a. Any monitoring or testing methods approved in this permit, including those in 40 CFR Parts 51, 60, 61, and 75; or
 - b. Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in section (1) or (2)(a).

2.0 PERMIT FEES

2.1 Annual air fee required. In accordance with ARSD 74:36:05:06.01, the owner or operator shall submit an annual administrative fee and an annual fee. The fee is based on actual emissions in accordance with ARSD 74:37.

2.2 Annual operational report. In accordance with ARSD 74:37:01:06, the Secretary will supply the owner or operator with an annual operational report in January of each year. The owner or operator shall complete and submit the operational report to the Secretary by March 1 of each year. The responsible official shall sign the operational report in the presence of a notary public.

2.3 Annual air fee. In accordance with ARSD 74:37:01:08, the Secretary will notify the owner or operator of the required annual air emission fee and administrative fee by June 1 of each year. The fees shall accrue on July 1 and are payable to the Department of Revenue by July 31 of each year.

3.0 PERMIT AMENDMENT AND MODIFICATION CONDITIONS

3.1 Permit flexibility. In accordance with ARSD 74:36:05:30, the owner or operator shall have the flexibility to make changes to the source during the term of this permit. The owner or operator shall provide the Secretary written notice at least seven days in advance of the proposed change (NOTE: The Secretary will forward a copy of the written notice to EPA). The written notice shall include a brief description of the change, the date on which the change is to occur, any change in emissions, and the proposed changes to this permit.

The Secretary will notify the owner or operator whether the change is an administrative permit amendment, a minor permit amendment, or a permit modification. A proposed change that is considered an administrative permit amendment or a minor permit amendment can be completed immediately after the Secretary receives the written notification. The owner or operator must

comply with both the applicable requirements governing the change and the proposed permit terms and conditions until the Secretary takes final action on the proposed change.

A proposed change that is considered a permit modification can not be constructed until the Secretary takes final action on the proposed change. Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except that the required review shall cover only the proposed changes.

3.2 Administrative permit amendment. In accordance with ARSD 74:36:05:33, the Secretary has 60 days from receipt of a written notice to verify that the proposed change is an administrative permit amendment. The Secretary considers a proposed change an administrative permit amendment if the proposed change accomplishes one of the following:

1. Corrects typographical errors;
2. Changes 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 source;
4. The ownership or operational control of a source change and the Secretary determines that no other change in this permit is necessary. However, the new owner must submit a certification of applicant form and a written statement specifying the date for transfer of operating permit responsibility, coverage, and liability; or
5. Any other changes that the Secretary and the administrator of EPA determines to be similar to those requirements in this condition.

3.3 Minor permit amendment. In accordance with ARSD 74:36:05:38, the Secretary has 90 days from receipt of a written notice or 15 days after the end of EPA's 45-day review period, whichever is later, to take final action on a minor permit amendment. Final action consists of issuing or denying a minor permit amendment or determining that the proposed change is a permit modification. The Secretary considers a proposed change to be a minor permit amendment if the proposed change:

1. Does not violate any applicable requirements;
2. Does not involve significant changes to existing monitoring, reporting, or record keeping requirements;
3. Does not require or change a case-by-case determination of an emission limit or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; or
4. Does not seek to establish or change a permit term or condition for which the source has assumed to avoid an applicable requirement, a federally enforceable emission cap, or an alternative emission limit. An alternative emission limit is approved pursuant to regulations promulgated under section 112(i)(5) of the federal Clean Air Act.

3.4 Permit modification. In accordance with ARSD 74:36:05:39, an owner or operator may apply for a permit modification. A permit modification is any proposed change that meets the definition of a modification in ARSD 74:36:01:10 or is not an administrative amendment or a

minor permit amendment. Modification is defined as a physical change in or change in the operation of a source that results in at least one of the following:

1. An increase in the amount of an air pollutant emitted by that source or in the emission of an air pollutant not previously emitted;
2. A significant change to existing monitoring, reporting, or record keeping requirements in this permit;
3. The change requires or changes a case-by-case determination of an emission limit or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; or
4. The change seeks to establish or change a permit term or condition for which there is a corresponding underlying applicable requirement that the source has assumed to avoid an applicable requirement, a federally enforceable emissions cap assumed to avoid classification as a modification under Title I of the Clean Air Act, or an alternative emissions limit approved pursuant to regulations promulgated under § 112(i)(5) of the Clean Air Act.

Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except that the required review shall cover only the proposed changes.

3.5 Permit revision. In accordance with ARSD 74:36:05:40, the Secretary may reopen and revise this permit to meet requirements of SDCL 34A-1 or the federal Clean Air Act.

3.6 Testing new fuels or raw materials. In accordance with ARSD 74:36:11:04, an owner or operator may request permission to test a new fuel or raw material to determine if it is compatible with existing equipment before requesting a permit amendment or modification. A complete test proposal shall consist of the following:

1. A written proposal that describes the new fuel or raw material, operating parameters, and parameters that will be monitored and any testing associated with air pollutant emissions during the test;
2. An estimate of the type and amount of regulated air pollutant emissions that will result from the proposed change; and
3. The proposed schedule for conducting the test. In most cases the owner or operator will be allowed to test for a maximum of one week. A request for a test period longer than one week will need additional justification. A test period shall not exceed 180 days.

The Secretary shall approve, conditionally approve, or deny in writing the test proposal within 45 days after receiving a complete proposal. Approval conditions may include changing the test schedule or pollutant sampling and analysis methods. Pollutant sampling and analysis methods may include, but are not limited to performance testing, visible emission evaluation, fuel analysis, dispersion modeling, and monitoring of raw material or fuel rates.

If the Secretary determines that the proposed change will result in an increase in the emission of a regulated air pollutant or result in the emission of an additional regulated air pollutant, the Secretary shall give public notice of the proposed test for 30 days. The Secretary shall consider

all comments received during the 30-day public comment period before making a final decision on the test.

The Secretary will not approve a test if the test would cause or contribute to a violation of a national ambient air quality standard or a prevention of significant deterioration increment.

4.0 PERMIT RENEWAL REQUIREMENTS

4.1 Permit effective. In accordance with ARSD 74:36:05:07, this permit shall expire five years from date of issuance unless reopened or terminated for cause.

4.2 Permit renewal. In accordance with ARSD 74:36:05:08, the owner or operator shall submit an application for a permit renewal at least 180 days before the date of permit expiration if the owner or operator wishes to continue an activity regulated by this permit. The current permit shall not expire and shall remain in effect until the Secretary takes final action on the timely permit renewal application.

4.3 Permit expiration. In accordance with ARSD 74:36:05:28, permit expiration terminates the owner's or operator's right to operate any unit covered by this permit.

5.0 RECORD KEEPING AND REPORTING REQUIREMENTS

5.1 Record keeping and reporting. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or application. The records shall be maintained on site for the first two years and may be maintained off site for the last three years. All records must be made available to the Secretary for inspection. All notifications and reports shall be submitted to the following address:

South Dakota Department of Environment and Natural Resources
PMB 2020, Air Quality Program
523 E. Capitol, Joe Foss Building
Pierre, SD 57501-3182

5.2 Signatory requirements. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:12, all applications submitted to the Secretary shall be signed and certified by a responsible official. A responsible official for a corporation is a responsible corporate officer and for a partnership or sole proprietorship is a general partner or the proprietor, respectively. All reports or other information submitted to the Secretary shall be signed and certified by a responsible official or a duly authorized representative. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Secretary; and
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

The responsible official shall notify the Secretary if an authorization is no longer accurate. The new duly authorized representative must be designated prior to or together with any reports or information to be signed by a duly authorized representative.

5.3 Certification statement. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(14)(a), all documents required by this permit, including application forms, reports, and compliance certification, must be certified by a responsible official or a duly authorized representative. The certification shall include the following statement:

“I certify that, based on information and belief formed after reasonable inquiry the statements and information in this document and all attachments are true, accurate, and complete.”

5.4 Operations and maintenance plan. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1350(a) and 63.1350(b), the owner or operator shall maintain and implement the operations and maintenance plan. The plan includes the following:

1. Procedures for proper operation and maintenance of the permitted sources in Table #1, except for Units #1, #2, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, and #62b;
2. Corrective actions for exceedances of emission and operational limits;
3. Procedures to be used during an inspection of the components of the combustion system of each kiln at least once per year; and
4. Procedures to periodically monitor opacity in accordance with permit conditions 8.1 and 8.2.

Failure to comply with the provisions of the operations and maintenance plan shall be considered a violation.

5.5 Startup, shutdown, and malfunction plan. In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.6(e)(3), the owner or operator shall develop, maintain, and implement a startup, shutdown, and malfunction plan. The owner or operator may use its standard operating procedures (SOP) manual, Occupational Safety and Health Administration (OSHA) plan, or other plan to satisfy the requirement for a startup, shutdown, and malfunction plan provided the alternative plans meet all the requirements of this permit condition. The startup, shutdown, and malfunction plan shall describe, in detail, the following:

1. Procedures for proper operation and maintenance of the permitted units in Table #1 during periods of startup, shutdown, and malfunctions, except for Units #1, #2, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, and #65;

2. A program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed an applicable emission limit;
3. Ensure that, at all times, the owner or operator operates and maintains each unit, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established in permit condition 6.14;
4. Ensure that the owner or operator is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and
5. Reduce the reporting burden associated with periods of startup, shutdown, and malfunction, including corrective action taken to restore malfunction process and air pollution control equipment to its normal or usual manner of operation.

If a startup, shutdown, or malfunction causes the source to exceed any applicable emission limit and the owner or operator followed the procedures specified in the startup, shutdown, and malfunction plan, the owner or operator shall maintain records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a “checklist,” or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event such as the occurrence and duration of each startup or shutdown and malfunction of the unit or associated air pollution control or monitoring equipment. These occurrences shall be reported in the semiannual report required in permit condition 5.9.

If a startup, shutdown and malfunction plan is not followed and an exceedance of an emission limit occurs, the owner or operator shall record the actions taken for that event and must report such actions within two working days after commencing actions inconsistent with the plan, followed by a letter within seven working days after the end of the event.

The Secretary will require appropriate revisions to the startup, shutdown, and malfunction plan if it is determined that the plan does not address a startup, shutdown, or malfunction event that has occurred; fails to provide for the operation of the unit(s), including associated air pollution control and monitoring equipment, during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by permit condition 6.14; does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or includes an event that does not meet the definition of startup, shutdown, or malfunction.

The owner or operator may periodically revise the startup, shutdown, and malfunction plan, without prior approval from the Secretary, as necessary to satisfy the requirements of this permit condition or to reflect changes in equipment or procedures. The owner or operator shall inform the Secretary of each revision to a startup, shutdown, and malfunction plan in the semiannual report required by permit condition 5.9. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and

maintaining a unit during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established in this permit, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the Secretary.

If the startup, shutdown, and malfunction plan is revised, the owner or operator must maintain onsite each previous (e.g. superseded) version of the startup, shutdown, and malfunction plan for a period of five years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the facility ceases operation or is otherwise no longer subject to this permit condition, the owner or operator must retain a copy of the most recent plan for five years from the date the facility ceases operation or is no longer subject to this part.

5.6 Monitoring log. In accordance with ARSD 74:36:05:16.01(9), the owner or operator must maintain a monitoring log. The monitoring log shall contain the following information:

1. Maintenance schedule for the air pollution control equipment specified for Units #1, #2, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, and #65. At a minimum, the maintenance schedule shall meet the manufacturer's recommended schedule for maintenance. The following information shall be recorded for maintenance:
 - a. Identify the unit;
 - b. The date and time maintenance was performed;
 - c. Description of the type of maintenance;
 - d. Reason for performing maintenance; and
 - e. Signature of person performing maintenance;
2. The following information shall be recorded for each visible emission reading required in permit condition 8.1:
 - a. Identify the unit;
 - b. The date and time the visible emission reading was performed;
 - c. If visible emissions were observed;
 - d. Description of maintenance performed to eliminate visible emissions;
 - e. Visible emission evaluation if visible emissions are not eliminated; and
 - f. Signature of person performing visible emission reading and/or visible emission evaluation.
3. The owner or operator shall maintain relevant records of the occurrence and duration of each startup, shutdown, or malfunction of process equipment and/or air pollution control equipment;
4. The following information shall be recorded within two days of each emergency exceedance:
 - a. The date of the emergency exceedance and the date the emergency exceedance was reported to the Secretary;
 - b. The cause(s) of the emergency;
 - c. The reasonable steps taken to minimize the emissions during the emergency; and
 - d. A statement that the permitted equipment was at the time being properly operated.

5.7 Annual records. In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate and record the following amounts from January 1 to December 31 of each year:

1. The amount of material fed or processed by each unit listed in Table #1;
2. The number of hours operated by each unit listed in Table #1; and
3. The amount of coal burned in Units #3, #4, and #9.

5.8 Quarterly report -- excess air emissions. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall submit a quarterly excess emission report. The report shall contain the following information:

1. Name of the facility, permit number, reference to this permit condition, and identify the submittal as a quarterly report;
2. Any period in which the sulfur dioxide, nitrogen oxide, or carbon monoxide emission limits for the kiln #6 system (Units #9, #11, and #41) in permit condition 6.8 are exceeded based on the compliance period. If an exceedance occurs, the report shall identify the following:
 - a. The date, time, and time period of each exceedance;
 - b. Magnitude of the exceedance;
 - c. Cause of the exceedance; and
 - d. Measures taken to bring the operations back into compliance.

In the case where no exceedance has occurred, the quarterly report shall state that no exceedance has occurred.

3. Any period in which the continuous emission monitoring system was inoperable and did not collect a valid one-hour average while the unit was operational. The following information shall be submitted:
 - a. The date, time and time period of each period during which the continuous monitoring system was inoperative and did not collect a valid one-hour period;
 - b. The reason the continuous emission monitoring system is down; and
 - c. The measures taken to bring the continuous emission monitoring system on line again and measures taken to prevent the reason the system went down from occurring again.

In the case when there was no time in which the continuous monitoring system was inoperable and did not collect a valid one-hour period while the unit was operational, the quarterly report shall state that the continuous monitoring system was operational at all times.

The quarterly report shall be postmarked no later than the 30th day following the end of each calendar quarter.

5.9 Semiannual excess emissions and monitoring report. In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.10(e)(3) and ARSD 74:36:08:21, as referenced to 40 CFR § 63.1354(b)(8 and 9) and (c) and ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall submit a semiannual excess emissions and monitoring report to the Secretary. The semiannual reports shall include a summary of the following information on each permitted unit, except Units #1, #2, #40, #41, #41b, #41c, #41d, #41e, #41f, #41g, #41h, #41i, #62b, and #65:

1. Name of the facility, permit number, reference to this permit condition, identify the submittal as a semiannual report, and calendar dates covered in the reporting period;
2. The emission and/or operational limits that pertains to each unit;
3. Monitoring equipment manufacturer and model number, if applicable;
4. The date, magnitude, and duration of all exceedances of maximum control device inlet gas temperature limits specified in permit condition 6.10;
5. All failures to calibrate thermocouples and other temperature sensors as required under permit condition 7.10;
6. The results of any combustion system component inspections conducted within the reporting period as required by permit condition 8.10;
7. All failures to comply with any provision of the operations and maintenance plan developed in accordance with permit condition 5.4;
8. The magnitude of opacity for all 6-minute block averages where the average opacity was greater than or equal to opacity limit specified in Chapter 6.0, the time period, and the date that the excess emission occurred for each unit with a continuous opacity monitors;
9. Using the following categories, identify the reason for the excess emission specified in subsection (8) of this permit condition:
 - a. Startup and/or shutdown;
 - b. Control equipment problems;
 - c. Process problems;
 - d. Other known causes (explain); and
 - e. Unknown causes;
10. The date and time during which the continuous opacity monitoring system was inoperative, except for zero and span checks;
11. Using the following categories, identify the reason for the continuous opacity monitoring system being inoperative:
 - a. Monitor equipment malfunctions;
 - b. Non-monitor equipment malfunctions;
 - c. Quality assurance calibrations;
 - d. Other known causes; and
 - e. Unknown causes; and
12. The percentage of time that the continuous opacity monitoring system was inoperable during the reporting period;
13. Each revision to the startup, shutdown, and malfunction plan that occurred during the reporting period; and
14. Startup, shutdown and malfunction report for exceedances that occurred during the reporting period and the owner or operator followed the startup, shutdown, and malfunction plan. The report shall identify actions taken to minimize emissions during such startups, shutdowns, and malfunctions. The report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limit to be exceeded.

The semiannual report shall be postmarked no later than the 30th day following the end of each semiannual period (January 30th and July 30th).

5.10 Annual compliance certification. In accordance with ARSD 74:36:05:16.01(14), the owner or operator shall submit an annual compliance certification letter to the Secretary by March 1 of each year this permit is in effect (NOTE: The Secretary will forward a copy of the certification letter to EPA). The certification shall contain the following information:

1. Methods used to determine compliance, including: monitoring, record keeping, performance testing and reporting requirements;
2. The source is in compliance and will continue to demonstrate compliance with all applicable requirements;
3. In the event the source is in noncompliance, a compliance plan that indicates how the source has or will be brought into compliance; and
4. Certification statement required in permit condition 5.3.

5.11 Reporting permit violations. In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall report all permit violations. A permit violation should be reported as soon as possible, but no later than the first business day following the day the violation was discovered. The permit violation may be reported by telephone to the South Dakota Department of Environment and Natural Resources at (605) 773-3151 or by FAX at (605) 773-5286.

A written report shall be submitted within five days of discovering the permit violation. Upon prior approval from the Secretary, the submittal deadline for the written report may be extended up to 30 days. The written report shall contain:

1. Description of the permit violation and its cause(s);
2. Duration of the permit violation, including exact dates and times; and
3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the permit violation.

5.12 Initial startup notification for Unit #63, #64, #66, and #67. In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the actual date of initial startup of Unit #63, #64, #66, and #67. Initial startup of Unit #63, #64, #66, and #67 is the date that air is first passed through the appropriate baghouse. The initial startup notification shall be postmarked within 15 days after such date and contain the following information:

1. Identify submittal as initial startup notification;
2. Name of facility, permit number, and reference to this permit condition; and
3. Actual date of initial startup of Unit #63.

5.13 Recordkeeping requirements for Unit #68 and #69. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR § 63.1355, the owner or operator shall maintain the following information:

1. Records of the occurrence and duration of each startup or shutdown;
2. Records of the occurrence and duration of each malfunction of operation or air pollution control;
3. Records of corrective actions taken to restore malfunction process and air pollution control to its normal or usual manner of operation; and
4. Records of the visible emission readings and visible emission tests.

6.0 CONTROL OF REGULATED AIR POLLUTANTS

6.1 Opacity limit. In accordance with ARSD 74:36:07:16, as referenced to 40 CFR §§ 60.252(a)(2) and 60.252(c), ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1343(b)(2), 63.1345(a)(2), 63.1347 and 63.1348 and ARSD 74:36:12:01, the owner or operator shall not discharge into the ambient air an air contaminant of a density equal to or greater than that opacity limit specified in Table #3 for the appropriate permitted unit, operations, and process:

Table #3 – Opacity Emission Limit

Unit	Description	Emission Limit
1	Primary and secondary crushers	20 percent
2	Screen	20 percent
3	Rotary kiln #4	20 percent
4	Rotary kiln #5	20 percent
5a	Kiln #4 and #5 clinker coolers	10 percent
5b	Kiln #4 and #5 clinker coolers	10 percent
6	Raw material storage building to two kiln feed storage silos	10 percent
6a	Rock silo to Loesche Mill	10 percent
6b	Kiln feed storage silo to kiln #6	10 percent
7	Penthouse storage #1 (south)	10 percent
7a	Penthouse storage #1 (south)	10 percent
7b	Clinker shed to finish mills	10 percent
7c	Raw Shed to Loesche Mill	10 percent
7d	Raw material transfer	10 percent
7e	Gypsum raw shed to old clinker	10 percent
7f	Raw shed to Loesche Mill	10 percent
7g	Gypsum raw shed to old clinker	10 percent
8	Penthouse storage #2 (north)	10 percent
8a	Penthouse storage #2 (north)	10 percent
8b	Penthouse storage #2 (north)	10 percent
8c	Rock silo discharge	10 percent
9	Rotary kiln #6	20 percent
10	Dry process clinker cooler	10 percent
11	Alkali bypass	20 percent
12	Finish mill #3	10 percent
13	Finish mill #4	10 percent
14	Finish mill #5	10 percent
15	Finish mill #6	10 percent
16	Finish mill #7 (mill sweep)	10 percent
16a	Finish mill #7 (mill separator)	10 percent
16b	Finish mill #7 (transfer)	10 percent
16c	Finish mill #7 (transfer)	10 percent

Unit	Description	Emission Limit
16d	Clinker transfer system	10 percent
17	Bulk storage silos	10 percent
18	Bulk storage silos	10 percent
19	Bulk storage silos	10 percent
20	Bulk storage silos	10 percent
21	Bulk storage silos	10 percent
24	Rail storage silos	10 percent
25	Rail storage silos	10 percent
26	Rail storage silos	10 percent
27	Bulk rail load outs	10 percent
28	Bulk rail load outs	10 percent
35	East bulk truck load out	10 percent
36	West bulk truck load out	10 percent
37	Cement bagging	10 percent
38	Cement bagging	10 percent
39	Cement bagging	10 percent
40	Wet kiln waste to waste bin	20 percent
41	Coal mill	20 percent
41b	Coal stacker top	20 percent
41c	Coal surge bin top	20 percent
41d	Coal tunnel to coal stacker	20 percent
41e	Coal surge bin top	20 percent
41f	Coal transfer	20 percent
41g	Coal bin #4	20 percent
41h	Coal bin #5	20 percent
41i	Coal bin #6	20 percent
62b	Coal – hopper to conveyor	20 percent
63	Air separator – kiln #6 feed system	10 percent
64	Belt transfer from kiln #4 and #5, kiln #4 and #5 weigh feeder, and kiln #4 bucket elevator	10 percent
65	Raw material transfer point from secondary crusher to a belt conveyor	20 percent
66	Clinker transfer point from kiln #5 clinker cooler to two bucket elevators	10 percent
67	Clinker transfer point from kiln #4 clinker cooler to pan conveyor	10 percent
68	Alkali bypass dust and cement storage silo – Silo 39	10 percent
69	Kiln dust, Silo 39, transfer truck load out	10 percent

This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement. In accordance with ARSD 74:36:07:16, as referenced to 40 CFR § 60.254(b)(2) and ARSD 74:36:11:01, compliance with the visible emission limit shall be based on 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in this permit condition.

In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1350(c) and 63.1350(d)(3), compliance with the opacity limit for Units #3, #4, #5a, #5b, #9, #10 and #11 shall be based on the continuous opacity monitor required in permit condition 8.5. These units are in violation of the appropriate opacity limit if the average opacity for any 6-minute block period exceeds the appropriate opacity limit in Table #3.

6.2 Opacity limit for fugitive emissions from kiln #6 - coal mill system. In accordance with ARSD 74:36:07:16, as referenced to 40 CFR § 60.252(c), the owner or operator shall not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from the following fugitive sources associated with the coal mill system for kiln #6:

1. Coal processing and conveying equipment;
2. Coal storage system; or
3. Coal transfer and loading system.

In accordance with ARSD 74:36:07:16, as referenced to 40 CFR § 60.254(b)(2), compliance with the visible emission limit shall be based on 40 CFR Part 60, Appendix A, Method 9.

6.3 Opacity exceedances. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.11(c), 74:36:08:03, as referenced to 40 CFR § 63.7(e), and ARSD 74:36:12:01, an exceedance of the operating limit in permit condition 6.1 is not considered a violation during brief periods of start-up, shutdown, or malfunctions. Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions and are considered violations.

6.4 Best available control technology limits for particulate. In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall limit air emissions of particulate less than or equal to 10 microns in diameter (PM10) from the permitted units to less than or equal to the emission limits in Table #4 and #5.

Table #4 – PM10 Hourly Emission Limits

Unit	PM10 Emission Limit ¹
9	11.95 pounds per hour
10	8.59 pounds per hour
11	2.36 pounds per hour
41	2.09 pounds per hour

¹ - Compliance with the hourly emission limit shall be based on the filterable particulate. The performance test method shall be 40 CFR Part 51, Appendix M, Method 201 or an alternative method approved by the Secretary.

Table #5 – PM10 Emission Limits ¹

Unit #	PM10 Emission Limit	Unit #	PM10 Emission Limit
1	0.01 grains per dry standard cubic foot	16d	0.01 grains per dry standard cubic foot
2	0.01 grains per dry standard cubic foot	17	0.01 grains per dry standard cubic foot

Unit #	PM10 Emission Limit	Unit #	PM10 Emission Limit
6	0.01 grains per dry standard cubic foot	18	0.01 grains per dry standard cubic foot
6a	0.01 grains per dry standard cubic foot	19	0.01 grains per dry standard cubic foot
6b	0.01 grains per dry standard cubic foot	20	0.01 grains per dry standard cubic foot
7b	0.01 grains per dry standard cubic foot	21	0.01 grains per dry standard cubic foot
7c	0.01 grains per dry standard cubic foot	24	0.01 grains per dry standard cubic foot
7d	0.01 grains per dry standard cubic foot	25	0.01 grains per dry standard cubic foot
7e	0.01 grains per dry standard cubic foot	26	0.01 grains per dry standard cubic foot
7f	0.01 grains per dry standard cubic foot	27	0.01 grains per dry standard cubic foot
7g	0.01 grains per dry standard cubic foot	28	0.01 grains per dry standard cubic foot
8	0.01 grains per dry standard cubic foot	35	0.01 grains per dry standard cubic foot
8a	0.01 grains per dry standard cubic foot	36	0.01 grains per dry standard cubic foot
8b	0.01 grains per dry standard cubic foot	37	0.01 grains per dry standard cubic foot
8c	0.01 grains per dry standard cubic foot	38	0.01 grains per dry standard cubic foot
9	0.01 grains per dry standard cubic foot	39	0.01 grains per dry standard cubic foot
10	0.01 grains per dry standard cubic foot	41	0.01 grains per dry standard cubic foot
11	0.01 grains per dry standard cubic foot	41b	0.01 grains per dry standard cubic foot
12	0.01 grains per dry standard cubic foot	41c	0.01 grains per dry standard cubic foot
13	0.01 grains per dry standard cubic foot	41d	0.01 grains per dry standard cubic foot
14	0.01 grains per dry standard cubic foot	41e	0.01 grains per dry standard cubic foot
15	0.01 grains per dry standard cubic foot	41f	0.01 grains per dry standard cubic foot
16	0.01 grains per dry standard cubic foot	41i	0.01 grains per dry standard cubic foot
16a	0.01 grains per dry standard cubic foot	62b	0.01 grains per dry standard cubic foot
16b	0.01 grains per dry standard cubic foot	68	0.01 grains per dry standard cubic foot
16c	0.01 grains per dry standard cubic foot		

¹ - Compliance with the grains per dry standard cubic foot emission limit shall be based on the filterable particulate. The performance test method shall be 40 CFR Part 51, Appendix M, Method 201 or an alternative method approved by the Secretary.

6.5 Particulate limit for maximum achievable control technology standard. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1343(b)(1) and 60.1345(a)(1), the owner or operator shall not allow the emission of particulate in excess of the emission limit specified in Table #6 for the appropriate permitted unit, operations, and process.

Table #6 – Particulate Emission Limit

Unit	Description	Emission Limit
3	Rotary kiln #4	0.30 pounds per ton feed
4	Rotary kiln #5	0.30 pounds per ton feed
5a	Kiln #4 and #5 clinker coolers	0.10 pounds per ton feed ¹
5b		
10	Dry process clinker cooler	0.10 pounds per ton feed
9 and 11	Rotary kiln #6 and Alkali bypass (combined)	0.30 pounds per ton feed

¹ – The particulate limit for Unit #5a and #5b is a combined limit.

6.6 Particulate limit for Unit #41. In accordance with ARSD 74:36:07:16, as reference to 40 CFR § 63.252(a)(1), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #41 that contain total suspended particulate in excess of 0.031 grains per dry standard cubic foot.

6.7 Particulate limits. In accordance with ARSD 74:36:06:03(1) and 74:36:05:16.01(8), the owner or operator shall not allow the emission of particulate in excess of the emission limit specified in Table #7 for the appropriate permitted unit, operation, and process.

Table #7 – Particulate Emission Limit

Unit	Description	Emission Limit
7	Penthouse storage #1 (south)	1.0 pounds per ton
7a	Penthouse storage #1 (south)	1.0 pounds per ton
40	Wet kiln waste to waste bin	1.8 pounds per ton
41g	Coal bin #4	2.0 pounds per ton
41h	Coal bin #5	2.0 pounds per ton
63	Air separator – kiln #6 feed system	0.01 grains per dry standard cubic foot
64	Belt transfer from kiln #4 and #5, kiln #4 and #5 weigh feeder, and kiln #4 bucket elevator	0.01 grains per dry standard cubic foot
65	Raw material transfer point from secondary crusher to a belt conveyor	0.01 grains per dry standard cubic foot
66	Clinker transfer point from kiln #5 clinker cooler to two bucket elevators	0.01 grains per dry standard cubic foot
67	Clinker transfer point from kiln #4 clinker cooler to pan conveyor	0.01 grains per dry standard cubic foot
69	Kiln dust, Silo 39, transfer to truck load out	35.4 pounds per hour grains per dry standard cubic foot

6.8 Best available control technology limits for kiln #6 system. The kiln #6 system consists of Units #9, #11, and #41. In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall limit air emissions from the kiln #6 system to less than or equal to limits listed in Table #8.

Table #8 – BACT Emission Limits for Kiln #6 System

Kiln #6 System	Short Term Emission Limit ¹	Long Term Emission Limit ²
Sulfur Dioxide ^{4,6}	632 pounds per hour	885 tons per 12 month period ³
Nitrogen Oxide ⁷	-	2,267 tons per 12 month period ³
Carbon Monoxide ^{5,8}	3,250 pounds per hour	2,002 tons per 12 month period

¹ - The short term emission limit is used to demonstrate compliance with the short term (less than or equal to a 24 hour period) National Ambient Air Quality Standards for sulfur dioxide and carbon monoxide.

² - Compliance with the long term emission limit shall be based on a 12 month rolling average. Each monthly emission rate shall be added to the 11 previous monthly emission rates. The result shall be compared to the long term emission limit.

³ - The long term emission limit is used to demonstrate compliance with the annual National Ambient Air Quality Standard and PSD Increments.

⁴ - Compliance with the sulfur dioxide short term emission limit shall be based on a 24 hour block average. Each day, the 24 hourly emission rates shall be added together. The sum of the 24 one hour readings shall be divided by 24 and the result compared to the short term limit

⁵ - Compliance with the carbon monoxide short term emission limit shall be based on an 8 hour block average. The eight hourly rates shall be added together. The sum of the eight one-hour readings shall be divided by 8 and the result compared to the short term emission limit. There will be three 8 hour block averages per day. The three 8 hour blocks shall be from Midnight to 7:59 AM, 8:00 AM to 3:59 PM and 4:00 PM to 11:59 PM.

⁶ - Sulfur dioxide emissions for the kiln #6 system shall be the summation of the sulfur dioxide emissions recorded by the continuous emission monitoring system on Unit #9 and Unit #41 and the flow rate recorded by the continuous monitoring system on Unit #11 multiplied by the emission concentration determined from the annual stack test on Unit #11.

⁷ - Nitrogen oxide emissions from the kiln #6 system shall be the summation of the nitrogen oxide emissions recorded by the continuous emission monitoring system on Unit #9, the flow rate recorded by the continuous monitoring system on Unit #41 multiplied by the pollutant concentration from the continuous emission monitoring system on Unit #9, and the flow rate recorded by the continuous monitoring system on Unit #11 multiplied by the emission concentration determined from the annual stack test on Unit #11.

⁸ - Carbon monoxide emissions from the kiln #6 system shall be the summation of the carbon monoxide emissions recorded by the continuous emission monitoring system on Unit #9, the flow rate recorded by the continuous monitoring system on Unit #41 multiplied by the pollutant concentration from the continuous emission monitoring system on Unit #9, and the flow rate recorded by the continuous monitoring system on Unit #11 multiplied by the emission concentration determined from the annual stack test on Unit #11.

6.9 Sulfur dioxide limits. In accordance with ARSD 74:36:06:03(2), the owner or operator shall not allow the emission of sulfur dioxide in excess of the emission limit specified in Table #9 for the appropriate permitted unit, operations, and process.

Table #9 – Sulfur Dioxide Emission Limit

Unit	Description	Emission Limit
3	Rotary kiln #4	3.0 pounds per million Btu heat input
4	Rotary kiln #5	3.0 pounds per million Btu heat input

Compliance with the sulfur dioxide emission limit is based on a three-hour rolling average, which is the arithmetic average of three contiguous one-hour periods.

6.10 Dioxin and furan limit for wet kilns, dry kiln and alkali bypass. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR § 63.1343(b)(3), the owner or operator shall not allow the emission of dioxins and furans in excess of the emission limit specified in Table #10 for the appropriate permitted unit, operations, and process.

Table #10 – Dioxin and Furan Emission Limits

Unit	Description	Emission Limit ¹
3	Rotary kiln #4	8.7 x 10 ⁻¹¹ grains per dry standard cubic feet or 1.7 x 10 ⁻¹⁰ grains per dry standard cubic feet ²
4	Rotary kiln #5	8.7 x 10 ⁻¹¹ grains per dry standard cubic feet or 1.7 x 10 ⁻¹⁰ grains per dry standard cubic feet ²
9 and 11	Rotary kiln #6 and Alkali bypass and alkali waste to waste bin transfer system	8.7 x 10 ⁻¹¹ grains per dry standard cubic feet or 1.7 x 10 ⁻¹⁰ grains per dry standard cubic feet ²

¹ – Emission limits are toxicity equivalent and corrected to seven percent oxygen.

² – The alternative emission limit applies if the average of the performance test run average temperatures at the inlet to the particulate control device is 400 degrees Fahrenheit or less.

6.11 Inlet temperature limit for wet kilns, dry kiln, and alkali bypass air pollution control device. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR § 63.1344(b)(3), the owner or operator shall operate the kilns and alkali bypass such that the temperature of the gas at the inlet to each kiln and the alkali bypass particulate control device does not exceed the applicable temperature limit specified in Table #11.

Table #11 – Inlet Temperature Limit

Unit	Description	Temperature Limit ¹
3	Rotary kiln #4	467 degree Fahrenheit
4	Rotary kiln #5	412 degree Fahrenheit
9	Rotary kiln #6 (Raw mill operating)	327 degree Fahrenheit
9	Rotary kiln #6 (Raw mill not operating)	547 degree Fahrenheit
11	Alkali bypass	533 degree Fahrenheit

¹ - Compliance with the temperature limits shall be based on a 3-hour rolling average determined by continuous temperature monitors required in permit condition 8.11.

The temperature limits in Table #11 are based on the performance test conducted in August 2004. A temperature limit greater than the temperature limit specified in Table #11 may occur provided a stack performance test is conducted and demonstrates compliance with permit condition 6.9 of the permit at the higher temperature.

6.12 Air emission exceedances – emergency conditions. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(18), the Secretary will allow for an unavoidable emission exceedance of a technology-based emission limit if the exceedance is caused by an emergency condition and immediate action is taken by the owner or operator to restore the operations back to normal. An emergency condition is a situation arising from a sudden and reasonably unforeseeable event beyond the control of the source, including acts of God. An emergency shall not include an emission exceedance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. The owner or operator shall notify the Secretary within two working days of the incident and take all steps possible to eliminate the excess emissions. The notification must provide a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. If the notification is submitted orally, a written report summarizing the information required by the notification shall be submitted and postmarked within 30 days of the oral notification.

6.13 Circumvention not allowed. In accordance with ARSD 74:36:05:47.01, the owner or operator may not install, use a device, or use a means that conceals or dilutes an air emission that would otherwise violate this permit. This includes operating a unit or control device that emits air pollutants from an opening other than the designed stack, vent, or equivalent opening.

6.14 Minimizing emissions. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.11(d) and ARSD 74:36:08:03, as referenced to 40 CFR § 63.6(e)(1), the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, maintain and operate the facility, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing air pollution emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the unit to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in permit condition 5.5, review of operation and maintenance records, and inspection of the facility. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

7.0 PERFORMANCE TESTS

7.1 Performance test may be required. In accordance with ARSD 74:36:11:02, the Secretary may request a performance test. A performance test shall be conducted while operating the unit at or greater than 90 percent of its maximum design capacity as stated in permit condition 1.1, unless otherwise specified by the Secretary.

7.2 Test methods and procedures. The owner or operator shall conduct the performance test in accordance with 40 CFR Part 60, Appendix A; 40 CFR Part 63, Appendix A; and 40 CFR Part 51, Appendix M unless prior approval is obtained from the Secretary.

7.3 Representative performance test. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(c), performance tests shall be conducted under such conditions as the Secretary shall specify to the owner or operator based on the representative performance of the unit being tested. The owner or operator shall make available to the Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during

periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in this permit.

7.4 Submittal of test plan. In accordance with ARSD 74:36:11:01, the owner or operator shall submit the proposed testing procedures to the Secretary at least 30 days before any performance test. The Secretary will notify the owner or operator if the proposed stack test procedures are approved or denied. If the proposed test procedures are denied, the Secretary will provide written notification that outlines what needs to be completed for approval.

7.5 Notification of test. In accordance with ARSD 74:36:11:03, the owner or operator shall notify the Secretary at least 10 days prior to the start of a performance test to arrange for an agreeable test date when the Secretary may observe the test. The Secretary may extend the deadline for the performance test in order to accommodate schedules in arranging an agreeable test date.

7.6 Performance test report. In accordance with ARSD 74:36:11:02, ARSD 74:36:08:21, as referenced to 40 CFR § 63.1349(a) and ARSD 74:36:05:16.01(9), the owner or operator shall submit a performance test report to the Secretary within 60 days after completing the performance test or by a date designated by the Secretary. The performance test report shall contain the following information:

1. A brief description of the process and the air pollution control system being tested;
2. Sampling location description(s);
3. A description of sampling and analytical procedures and any modifications to standard procedures;
4. Test results;
5. Quality assurance procedures and results;
6. Records of operating conditions during the test, preparation of standards, and calibration procedures;
7. Raw data sheets for field sampling and field and laboratory analyses;
8. Documentation of calculations;
9. All data recorded and used to establish parameters for compliance monitoring; and
10. Any other information required by the test method.

7.7 Particulate testing requirements. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1349(b), 63.1349(c) and 63.1349(e), the owner or operator shall conduct a performance test on Units #3, #4, #9, #10, and #11 every five years. The next performance test shall be conducted on or before August 2009. In addition, the owner or operator is required to repeat a performance test for a kiln within 360 hours of initiating any significant change in the feed or fuel from that used in the previous stack performance test. The stack performance test shall be conducted to determine the particulate emission rates and compliance with permit condition 6.4. The stack performance test shall be conducted as specified below:

1. The particulate emission rates shall be determined using 40 CFR, Part 60, Appendix A,

Method 5. Each performance test shall consist of three separate runs under the conditions that exist when the unit is operating at the highest load or capacity level reasonably expected to occur. Each run shall be conducted for at least one hour and the minimum sample volume shall be 30 dry standard cubic feet. The average of the three runs shall be used to determine compliance;

2. Suitable methods shall be used to determine the kiln feed rate, except for fuels, for each run;
3. The emission rate “E” of particulate shall be computed for each run using the Equation 1.

Equation 1

$$E = (Cs \times Qsd) / (P \times K)$$

where:

E = emission rate of particulate, in pounds per ton of feed rate;

Cs = concentration of particulate, in grains per dry standard cubic foot;

Qsd = volumetric flow rate of effluent gas, in dry standard cubic foot per hour;

P = total kiln feed (dry basis) rate, in tons per hour; and

K = conversion factor, 7,000 grains per pound.

4. A separate stack performance test for Unit #9 shall be run when the Fuller Loesche mill is operating and when it is not operating. Units #9 and #11 shall be tested simultaneously during the two separate stack performance tests. The combined emission rate of particulate from the kiln and alkali bypass shall be computed for each run using Equation 2.

Equation 2

$$Ec = ((Csk \times Qsdk) + (Csb \times Qsdb)) / (P \times K)$$

where:

Ec = combined emission rate of particulate from kiln and alkali bypass, in pounds per ton of feed rate;

Csk = concentration of particulate from kiln, in grains per dry standard cubic foot;

Qsdk = volumetric flow rate of kiln effluent gas, in dry standard cubic foot per hour;

Csb = concentration of particulate from alkali bypass, in grains per dry standard cubic foot;

Qsdb = volumetric flow rate of alkali bypass effluent gas, in dry standard cubic foot per hour;

P = total kiln feed (dry basis) rate, in tons per hour; and

K = conversion factor, 7,000 grains per pound.

5. The owner or operator shall conduct a performance test on Unit #5a and #5b annually beginning in 2009. After three years of consecutive performance testing that shows compliance with permit condition 6.4 the owner or operator may revert to testing every five years. Stack performance testing for Unit #5a and #5b shall be conducted simultaneously while operating Kiln #4 and #5 at a minimum of 90% of each kilns maximum operating rate. The stack performance tests shall be conducted as specified in section 1 and 2 of this permit condition. The particulate emission rate shall be computed for each run using Equation 3.

Equation 3

$$E = ((Cs1 \times Qsd1) + (Cs2 \times Qsd2)) / ((P1 + P2) \times K)$$

where:

- E = emission rate of particulate, in pounds per ton of feed rate;
- Cs1 = Unit #5a particulate concentration, in grains per dry standard cubic foot;
- Cs2 = Unit #5b particulate concentration, in grains per dry standard cubic foot;
- Qsd1 = Unit #5a volumetric flow rate of effluent, in dry standard cubic foot per hour;
- Qsd2 = Unit #5b volumetric flow rate of effluent, in dry standard cubic foot per hour;
- P1 = total Kiln #4 feed rate on a dry basis, in tons per hour;
- P2 = total Kiln #5 feed rate on a dry basis, in tons per hour; and
- K = conversion factor, 7,000 grains per pound; and

7.8 Opacity testing requirements. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1349(b) and 63.1349(c), the owner or operator shall conduct an opacity test on Units #6, #6a, #6b, #7, #7a, #7b, #7c, #7d, #7f, #7g, #8, #8a, #8b, #8c, #12, #13, #14, #15, #16, #16a, #16b, #16c, #16d, #17, #18, #19, #20, #21, #24, #25, #26, #27, #28, #35, #36, #37, #38, #39, #63, #64, #66, and #67 every five years. In addition, an initial performance test shall be conducted on Unit #63, #64, #66, #67, #68 and #69 within 180 days of initial startup of the appropriate unit. The next performance test shall be conducted on or before May 2007. The opacity test shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 9 and under conditions that exist when the unit or process is operating at the highest load or capacity level reasonably expected to occur. The maximum 6-minute average opacity exhibited during the test period shall be used to determine compliance. The duration of the opacity test shall be 3-hours (30 6-minute averages), except that the duration of the opacity test may be reduce to 1-hour if the following conditions apply:

1. There are no individual readings greater than 10 percent opacity; and
2. There are no more than three readings of 10 percent for the first 1-hour period.

7.9 Dioxin and furan testing requirements. In accordance with ARSD 74:36:08:21, as referenced to 40 CFR §§ 63.1349(b), 63.1349(d), and 63.1349(e), the owner or operator shall conduct a stack performance test on Units #3, #4, #9, and #11 every thirty months. The next performance test shall be conducted on or before February 2007. In addition, the owner or operator is required to repeat a performance test within 360 hours of initiating any significant change in the feed or fuel from that used in the previous performance test. The stack performance test will be conducted to determine dioxin and furan emission rates and compliance with permit condition 6.9. The dioxin and furan emission limit shall be determined by using the following methods:

1. 40 CFR Part 60, Appendix A, Method 23;
2. Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the unit is operating at the highest load or capacity level reasonably expected to occur. The duration of each run shall be at least three hours and the sample volume for each run shall be at least 90 dry standard cubic feet. The concentration shall be determined for each run and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance;
3. The temperature at the inlet to the unit's particulate control device during the period of the Method 23 test and the continuous temperature record(s) must be included in the

performance test report;

4. One-minute average temperatures must be calculated for each minute of each run of the test; and
5. The average temperature must be calculated for each run and the average temperature for all three runs must be determined and included in the performance test report.

7.10 Annual calibration of temperature monitors. In accordance with ARSD 74:36:07:16, as reference to 40 CFR § 60.253(b), the owner or operator shall calibrate the continuous temperature monitor required in permit condition 8.9 on an annual basis. The calibration procedures shall comply with ARSD 74:36:07:01, as reference to 40 CFR § 60.13(b).

In accordance with ARSD 74:36:08:21, as reference to 40 CFR § 63.1350(f)(6), the owner or operator shall recalibrate the thermocouples and other temperature sensors required in permit condition 8.11 on a quarterly basis.

7.11 Performance test procedures for Unit #41. In accordance with ARSD 74:36:07:16, as reference to 40 CFR § 60.254(b)(1), the owner or operator shall use 40 CFR, Part 60, Appendix A, Method 5 when determining the total suspended particulate concentration from Unit #41. The sampling time and sample volume for each run shall be at least 60 minutes and 30 dry standard cubic feet, respectively. Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.

7.12 Annual audit of continuous opacity monitors. In accordance with ARSD 74:36:08:21, as reference to 40 CFR § 63.8(e), the owner or operator shall conduct an annual audit on each continuous opacity monitor to verify that the monitors are maintaining the performance specifications noted in 40 CFR Part 60, Appendix B, Specification 1. The audit shall be conducted in a manner that is approved by the Secretary. The owner or operator shall contact the Secretary ten days prior to the audit to allow for the Secretary to be present during the audit. The continuous opacity monitor audit report shall be submitted to the Secretary within 60 days after completing the audits or by a date designated by the Secretary.

7.13 Annual performance test for Unit #11. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an annual performance test on Unit #11 for sulfur dioxide, nitrogen oxides, and carbon monoxide. The annual performance test must be conducted once each calendar year. The Secretary has the discretion to extend the deadline for completion of the performance test if circumstances reasonably warrant. If the extension results in the test being performed in the next calendar year, the extension does not waive the requirement for annual test for the next calendar year.

7.14 Initial performance test for Unit #63. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on Unit #63 for total suspended particulate matter and opacity. The initial performance test must be conducted within 60 days of the initial startup of Unit #63. The Secretary has the discretion to extend the deadline for completion of the performance test if circumstances reasonably warrant.

8.0 MONITORING REQUIREMENTS

8.1 Monthly monitoring for opacity limits. In accordance with ARSD 74:36:08:21, as reference to 40 CFR §§ 63.1348(b)(1)(i), 63.1348(b)3), 63.1350(f)(1) and 63.1350(f)(3), the owner or operator shall demonstrate compliance with the opacity limits in permit condition 7.1, on a periodic basis, except for Units #3, #4, #5a, #5b, and #9 through #16a, inclusive. Periodic monitoring shall be based on the amount of visible emissions from each unit and evaluated according to the following steps:

Step 1: If there are no visible emissions from a unit subject to an opacity limit, periodic monitoring shall consist of a visible emission reading. A visible emission reading shall consist of a visual survey of each unit in accordance with 40 CFR Part 60, Appendix A, Method 22, over a 10-minute period to identify if there are visible emissions. The visible emission reading must be conducted while the unit is in operation. Visible emission readings on each unit shall be based on the following frequency:

- a. The owner or operator shall conduct a visible emission reading once per calendar month;
- b. If no visible emissions are observed from a unit in six consecutive monthly visible emission readings, the owner or operator may decrease the frequency of readings from monthly to semiannually for that unit; or
- c. If no visible emissions are observed from a unit in two consecutive semiannual visible emission readings, the owner or operator may decrease the frequency of testing of readings from semiannually to annually for that unit.

Step 2: If visible emissions are observed from a unit during a visible emissions reading conducted in Step 1, the owner or operator shall conduct a visible emission test on that unit to determine if the unit is in compliance with the opacity limit specified in in permit condition 7.1. The emission test shall be for thirty minutes (i.e. five 6-minute averages) and conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The maximum 6-minute average opacity exhibited during the test period shall be used to determine compliance. The visible emission test must be conducted while the unit is in operation. Visible emission tests shall be based on the following frequency:

- a. The visible emission test must be conducted within one hour of witnessing a visible emission from a unit during a visible emission reading;
- b. Initiate, within one-hour, the corrective actions specified in the operating and maintenance plan required in permit condition 7.2
- c. The owner or operator must conduct visible emission readings on a monthly basis as outlined in Step 1 until it qualifies and chooses to implement the reduced frequencies noted in Steps 1(b) and 1(c).

The person conducting the visible emission test must be certified in accordance with 40 CFR Part 60, Appendix A, Method 9.

8.2 Daily monitoring for opacity limits. In accordance with ARSD 74:36:08:21, as reference to 40 CFR § 63.1350(e), the owner or operator shall demonstrate compliance with the opacity limits in Chapter 6.0 for Units #12, #13, #14, #15, #16, and #16a on a daily basis in accordance with 40 CFR, Part 60, Appendix A, Method 22. The Method 22 test shall be conducted while the units are operating at a representative performance condition. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during the Method 22 test, the owner or operator shall:

1. Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with permit condition 5.4; and
2. Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow-up Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the follow-up Method 22 test, the owner or operator shall conduct a visual emission test of each stack from which emissions were observed during the follow-up Method 22 test. The visible emission test shall be conducted in accordance with 40 CFR, Part 60, Appendix A, Method 9. The duration of the Method 9 test shall be 30 minutes.

The person conducting the visible emission test must be certified in accordance with 40 CFR Part 60, Appendix A, Method 9.

8.3 Certified personnel – visible emission tests. In accordance with ARSD 74:36:13:07, within 180 days after permit issuance the owner or operator shall maintain a person that is certified to perform a visible emission test in accordance with 40 CFR Part 60, Appendix A, Method 9. The owner or operator shall maintain a certified person throughout the remaining term of this permit.

8.4 Continuous emission monitoring systems. In accordance with ARSD 74:36:13:01, the owner or operator shall install, certify, operate, and maintain a continuous emission monitoring system on Units #9, #11, and #41. For Unit #9, the continuous emission monitoring system shall measure and record the sulfur dioxide, nitrogen oxide, and carbon monoxide emissions, and the exhaust gas flow rate. For Unit #11, the continuous emission monitoring system shall measure and record the exhaust gas flow rate. For Unit #41 the continuous emission monitoring system shall measure and record the sulfur dioxide emissions and the exhaust gas flow rate. The continuous emission monitoring systems shall operate at all times, including periods of startup, shutdown, and malfunctions. Monitor downtime is allowed for system breakdowns, repairs, calibration checks, zero and span adjustments, and at times when Units #9, #11, and/or #41 are not in operation.

8.5 Continuous opacity monitoring systems. In accordance ARSD 74:36:08:21, as reference to 40 CFR § 63.1350(c), the owner or operator shall install, certify, operate, and maintain a continuous opacity monitoring system on Units #3, #4, #5a, #5b, #9, #10, and #11. The continuous opacity monitoring systems shall operate at all times, including periods of startup, shutdown, and malfunctions. Monitor downtime is allowed for system breakdowns, out of control periods, repairs, maintenance periods, calibration checks, zero (low-level) and high-

level (calibration drift adjustments), and at times when Units #3, #4, #5a, #5b, #9, #10, and/or #11 are not in operation.

8.6 Performance specifications and quality assurance. In accordance with ARSD 74:36:08:21, as reference to 40 CFR §§ 63.1350(c)(1) and 63.1350(d)(1) and ARSD 74:36:13:02, as referenced to 40 CFR § 60.13(a), the continuous emission and opacity monitoring systems shall meet the performance specifications in 40 CFR Part 60, Appendix B (Performance Specifications 1, 2 and 3). In addition, the continuous emission monitoring systems shall meet the quality assurance requirements in 40 CFR Part 60 Appendix F.

8.7 Re-certification of the continuous emission monitoring system. In accordance with ARSD 74:36:13:01, the owner or operator shall notify the Secretary in writing prior to making any planned changes to the continuous emission monitoring systems. If the change was unforeseen, the owner or operator shall notify the Secretary in writing within five working days after making the change.

In accordance with ARSD 74:36:13:02, as referenced to 40 CFR § 60.13(c), the owner or operator shall re-certify a continuous emission monitoring system for changes that invalidate the certification status. Changes that invalidate the certification status are as follows:

1. Replacement of the analyzer;
2. Change in location or orientation of the sampling probe or site;
3. Modification to the flue gas handling system which changes its flow characteristics; or
4. A change that in the Secretary's judgment significantly affects the ability of the system to measure or record the pollutant concentration and volumetric gas flow.

The owner or operator shall re-certify the continuous emission monitoring system within 90 days of completing any change, which invalidates the monitor's certification status. A calibration gas audit shall be conducted in accordance with 40 CFR, Part 60, Appendix F § 5.1.2 within 24 hours of making a change that invalidates the monitor's certification status. A two point calibration check shall be performed daily, thereafter, until the re-certification test is completed. The results of the re-certification test shall be submitted to the Secretary within 60 days after completing the test.

The following change to a continuous emission monitoring system does not invalidate the certification:

1. Routine or normal corrective maintenance;
2. Replacement of parts on the manufacturer's recommended spare parts list;
3. Software modifications in the automated data acquisition and handling system, where the modification is only for the purpose of generating additional or modified reports; or
4. Temporary replacement of an analyzer with a similar analyzer. A calibration gas audit shall be conducted in accordance with 40 CFR, Part 60, Appendix F § 5.1.2 within 24 hours of installing a temporary replacement analyzer. A two point calibration check shall be performed daily, thereafter, until the temporary replacement analyzer has been replaced with the original analyzer or the temporary replacement analyzer has been certified. A temporary

replacement analyzer that is used on a unit for more than 30 days in a 12-month rolling period shall be certified. If the temporary analyzer is used for one hour or more during the day, that constitutes one day. The certification test shall be performed within 60 days of exceeding the 30 day limit. The results of the certification test shall be submitted to the Secretary within 60 days after completing the test.

8.8 Monitoring data. In accordance with ARSD 74:36:13:02, the continuous emission monitoring system shall monitor the sulfur dioxide, nitrogen oxide, and carbon monoxide emission rates in pounds per hour. The sulfur dioxide, nitrogen oxide, and carbon monoxide emission rates shall be based on one-hour averages computed from four or more data points equally spaced over each one-hour period. A one-hour period starts at the beginning of the hour and ends at the beginning of the following hour. Data recorded during monitor downtime shall be considered invalid data points and not included in the data averages. For one-hour periods during monitor calibrations, quality control audits or other required maintenance; a minimum of two data points at least 15 minutes apart must be collected to consider the one-hour average valid.

8.9 Continuous temperature monitor for Unit #41. In accordance with ARSD 74:36:07:16, as reference to 40 CFR § 60.253(a), the owner or operator shall install, calibrate, maintain, and continuously operate a monitoring device that measures the temperature of the gas stream at the exit of Unit #41. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus three degrees Fahrenheit.

8.10 Annual combustion system inspection. In accordance with ARSD 74:36:08:21, as reference to 40 CFR § 63.1350(i), the owner or operator shall conduct an inspection of the components of the combustion system of each kiln on an annual basis.

8.11 Continuous temperature monitor for kilns and alkali bypass. In accordance with ARSD 74:36:08:21, as reference to 40 CFR § 63.1350(f), the owner or operator shall install, calibrate, maintain, and continuously operate a monitoring device that records the temperature of the exhaust gases from Units #3, #4, #9, and #11 at the inlet to, or upstream of the units particulate control device. The monitoring and recording device shall meet the following specifications:

1. The recorder response range must include zero and 1.5 times either of the average temperatures established during a performance test; and
2. The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Secretary.

The 3-hour rolling average temperature shall be calculated as the average of 180 successive 1-minute average temperatures. Periods of time when 1-minute averages are not available shall be ignored when calculating 3-hour rolling averages. When 1-minute averages become available, the first 1-minute average is added to the previous 179 values to calculate the 3-hour rolling average. When the operating status of the Fuller Loesche mill is changed from off to on, or from on to off the calculation of the 3-hour rolling average temperature must begin anew, without considering previous records.

8.12 Compliance assurance monitoring. In accordance with ARSD 74:36:13:08, the owner or operator shall implement compliance assurance monitoring on Units #1 and #2 and demonstrate compliance with the particulate limits on a periodic basis.

1. For Units #1 and #2 compliance assurance monitoring shall be based on the visible emission readings taken in accordance with permit conditions 8.1 and 8.2.
2. If the corrective actions do not eliminate the visible emissions, the owner or operator shall perform the following:
 - a. The owner or operator shall only operate the appropriate unit within the established parameters; and
 - b. Conduct a performance test on the applicable unit to determine compliance with the particulate limits at the new range. The performance test shall be conducted within 60 days after the deviation is noted.

9.0 BEST AVAILABLE CONTROL MEASURES FOR FUGITIVE DUST SOURCES

9.1 Unpaved road controls. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall apply a chemical stabilizer on all main haul roads and a chemical stabilizer or water on all secondary roads that have daily vehicular traffic or an alternative method approved by the Secretary. The frequency of applying chemical stabilizer or water will be on an as needed basis to comply with the opacity limit in permit condition 9.8. The owner or operator may pave the main haul roads or secondary roads with tack seal, asphalt, recycled asphalt, or concrete. If the main haul road or secondary haul road is paved, the owner or operator shall meet the requirements of permit condition 9.2. A main haul road is defined as a passageway between the mining area and the processing facility or between the processing facility and the storage area in which material is transferred on a road. A secondary haul road is defined as a passageway in which there is daily vehicular traffic on normal working days other than the main haul roads.

9.2 Paved road and parking area controls. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall sweep and water flush, vacuum and water flush all paved roads and parking areas, or an alternative method approved by the Secretary to remove particulate matter that has the potential to be resuspended. The frequency of cleaning will be on an as needed basis to comply with the opacity limit in permit condition 9.8.

9.3 Track out area controls. In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall pave (asphalt or concrete) a track out area to maintain a stabilized surface starting from the point of intersection with the public paved surface into the facility boundary for a total distance of at least 100 feet and a width of at least 20 feet or install a wash station and require all haul truck vehicles leaving the facility to remove track out materials through the use of water.

For temporary track out areas (in use for less than 60 days in a calendar year), techniques and/or controls shall be implemented so as to prevent particulate matter from becoming entrained in violation of the opacity limit in permit condition 9.8.

9.4 Reclamation plan. In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall implement the reclamation plan approved by the Secretary. The owner or operator may propose modifications to the approved reclamation plan by written notice to the Secretary. The Secretary shall notify the owner or operator within 90 days after receipt of a modification to a reclamation plan on if the proposed modification is approved or disapproved. If the proposed modification is disapproved, the Secretary will provide the reason why the proposed modification was not approved and what is required for the proposed modification to be approved. The owner or operator shall resubmit the revised modification within 90 days of receiving the Secretary's notification. Lands which have been reclaimed and approved by the Secretary shall no longer be subject to the reclamation plan requirements as long as they remain reclaimed.

9.5 Open storage pile control. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall sample and analyze the silt content of open storage piles that have a height greater than or equal to three feet and have a total surface area greater than or equal to 150 square feet. The analysis shall be conducted once per calendar year and in accordance with ASTM C-136 or another equivalent method approved by the Secretary. Open storage pile controls shall be applied to each open storage pile that has a silt content of four percent by weight or greater. Silt is defined as any material with a particulate size less than 74 micrometers in diameter and passes through a number 200 sieve. Open storage pile controls shall be applied or constructed in a manner that maintains compliance with the opacity limit in permit condition 9.8. Open storage pile controls shall consist of at least one of the following:

1. Apply chemical stabilizer to the surface area of all open storage piles;
2. Apply water to the surface area of all open storage piles;
3. Install at least a two-sided enclosure with walls extending, at a minimum, to the top of the open storage pile; or
4. An alternative method approved by the Secretary

9.6 Waste pit controls. In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall apply a soil cement, water spray, or similar application to create a crusted surface over the entire waste pit or implement a combination of wind protection (i.e., wind-fence, wind-screen, three wall enclosure, etc.) and water spray application. Waste pit controls shall be applied or constructed in a manner that maintains compliance with the opacity limit in permit condition 9.8.

9.7 Blasting controls. In accordance with ARSD 74:36:05:16.01(8), no owner or operator shall blast during a high wind dust alert that is in effect except if the detonation charges have been set in the blasting holes prior to being notified of the high wind dust alert.

9.8 Opacity limit for fugitive sources. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall not discharge a visible emission to the ambient air of a density equal to or greater than 20 percent opacity from an

unpaved road, paved road or parking lot, crushing operation, open storage pile, track out area, or waste pit. The 20 percent opacity reading is based on a series of two minutes averages with a minimum observation period of six minutes. The opacity reading shall be determined by Tennessee Visual Emissions Method 1 as approved by EPA in 40 CFR §52.2220 or by 40 CFR Part 60, Appendix A, Method 9.

If an operation exceeds the opacity limit, the Secretary will allow the owner or operator two opportunities to correct the exceedance with existing controls and/or control measures. In the event of a third exceedance from the same operation, the Secretary will notify the owner or operator that the Best Available Control Measure (BACM) for that operation must be reevaluated. The owner or operator shall reevaluate BACM for that operation and submit a written proposal to the Secretary on the proposed new BACM for the operation within 60 days of receiving the Secretary's notification. The Secretary shall approve or disapprove the proposed new BACM within 60 days of receiving the proposal from the owner or operator. Once the proposed new BACM is approved by the Secretary, the permit will be revised to include the new BACM using the appropriate permit revision method identified in Chapter 3.0 of this permit.

9.9 Opacity readings during a high wind dust alert. In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), opacity readings documenting an exceedance during a high wind air pollution alert shall not be considered an exceedance of the opacity limit in permit condition 9.8. A high wind air pollution alert is based upon the following weather conditions:

1. Winds equal to or greater than 20 miles per hour on an hourly average occurring for two or more consecutive hours;
2. Peak winds of 40 miles per hour (one minute average) or greater; and
3. The above wind conditions with three or more days of low precipitation (less than 0.02 inches).