AIR QUALITY DIVISION
CHAPTER 6, SECTION 3
OPERATING PERMIT

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
122 West 25th Street
Cheyenne, Wyoming 82002

PERMIT NO. 3-2-098-1

Issue Date: **October 21, 2014**
Expiration Date: **May 4, 2017**
Effective Date: **October 21, 2014**
Replaces Permit No.: **3-2-098**

In accordance with the provisions of W.S. §35-11-203 through W.S. §35-11-212 and Chapter 6, Section 3 of the Wyoming Air Quality Standards and Regulations,

Mountain Cement Company
Section 17, Township 15 North, Range 73 West
Albany County, Wyoming

is authorized to operate a stationary source of air contaminants consisting of emission units described in this permit. The units described are subject to the terms and conditions specified in this permit. All terms and conditions of the permit are enforceable by the State of Wyoming. All terms and conditions of the permit, except those designated as not federally enforceable, are enforceable by EPA and citizens under the Act. A copy of this permit shall be kept on-site at the above named facility.

Steven A. Dietrich — 10-21-14
Steven A. Dietrich, Administrator, Air Quality Division — Date

Todd Parfitt, Director, Department of Environmental Quality — 10/22/14 Date

WAQSR CHAPTER 6, SECTION 3 OPERATING PERMIT

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

TABLE OF CONTENTS

(Modified October 21, 2014)

General Information 3

Source Emission Points 4

Total Facility Estimated Emissions 6

Facility-Specific Permit Conditions 7
- Facility-Wide Permit Conditions 7
- Source-Specific Permit Conditions 8
- Testing Requirements 10
- Monitoring Requirements 11
- Recordkeeping Requirements 14
- Reporting Requirements 16
- PSD Applicability Demonstration Requirements 19

WAQSR Chapter 5, Section 2 and 40 CFR 60 Subpart F Requirements 21
WAQSR Chapter 5, Section 2 and 40 CFR 60 Subpart Y Requirements 22
WAQSR Chapter 5, Section 2 and 40 CFR 60 Subpart OOO Requirements 23
WAQSR Chapter 5, Section 3 and 40 CFR 63 Subpart LLL Requirements 24
WAQSR Chapter 7, Section 3 Compliance Assurance Monitoring (CAM) Requirements 25

Compliance Certification and Schedule 26
- Compliance Certification 26
- Compliance Schedule 27

General Permit Conditions 28

State Only Permit Conditions 33

Summary of Source Emission Limits and Requirements 35

Abbreviations 41

Definitions 42

Appendix A: Operational Plan for Handling and Storage of Cement Clinker Outside
Appendix B: Alternate Testing Approval
Appendix C: Compliance Assurance Monitoring (CAM) Plan
Appendix D: Operation and Maintenance Plan
Appendix E: Actual Emissions Methodologies
Appendix F: **Reserved**

GENERAL INFORMATION

(Modified October 21, 2014)

Company Name: Mountain Cement Company

Mailing Address: 5 Sand Creek Road

City: Laramie State: Wyoming Zip: 82070

Plant Name: Mountain Cement Company

Plant Location: Section 17, Township 15 North, Range 73 West, Albany County, Wyoming
(Approximately 2.5 miles south of Laramie, Wyoming, west of US-287)

Plant Mailing Address: 5 Sand Creek Road

City: Laramie State: Wyoming Zip: 82070

Responsible Official: **Reserved**

Name of Owner: Mountain Cement Company Phone: (307) 745-4879

Plant Manager/Contact: Phil Lane Phone: (307) 745-2630

DEQ Air Quality Contact: District One Engineer Phone: (307) 777-7391
122 West 25th Street
Cheyenne, Wyoming 82002

SIC Code: 3241

Description of Process: Manufacturing of Portland cement; categorized as hydraulic cement production.

SOURCE EMISSION POINTS

(Modified October 21, 2014)

This table may not include any or all insignificant activities at this facility.

SOURCE ID#	SOURCE DESCRIPTION	SIZE	CH. 6, SEC. 2 PERMITS/WAIVERS
B-694	West Cement Storage Silos Load-in (formerly F-694)	140 TPH	CT-1137
B-808	Bulk Cement Bucket Elevator, F-K Pump	200 TPH	CT-1137
B-816-A	No. 7 Cement Silo Load-in and Load-out	200TPH	CT-1137
B-816-B	No. 8 Cement Silo Load-in	200 TPH	CT-1137
B-823	No. 8 Cement Silo Load-out	200 TPH	CT-1137
B-860	No. 11 Cement Silo Load-in	200TPH	CT-1137
B-865	Truck Scale/No. 11 Cement Silo Load-out	100 TPH	CT-1137
B-870	West Packhouse, West Silos Load-out	100 TPH	CT-1137
B-875	East Packhouse, East Silos Load-out	100 TPH	CT-1137
B-882	Railcar Unloading [1]	75TPH	MD-983
B-912	Cement Storage Silo Nos. 9/10 Load-in	90 TPH	AP-5557
B-954	Cement Storage Silo Nos. 9/10 Load-out	90 TPH	AP-5557
CKD	Cement Kiln Dust Load-out Spout	N/A	AP-437
F-405	Clinker Storage Load-in	150 TPH	CT-1137
F-406	Clinker Reclaim Transfer Tower	150 TPH	AP-S10
F-410	(5) Clinker Reclaim Tunnel Baghouses [1]	91.5 TPH	MD-983
F-531	Finish Mill "A" System	36 TPH	CT-1137
F-540	Finish Mill "B" Feed	70 TPH	MD-11739
F-544	Finish Mill "B" Vent	70 TPH	MD-11739
F-550	Finish Mill "B" Discharge	70 TPH	MD-11739
F-580	East Cement Storage Silos Load-in	140 TPH	CT-1137
F-776	Finish Mill "C"	70 TPH	MD-11739
K1-106	Kiln #1 Dust Return Elevator [1]	10 TPH	CT-1137
K-207-1	No. 1 Blending Silo	170 TPH	CT-1137
K-207-2	No. 2 Blending Silo	170 TPH	CT-1137
K-224	Kiln #2 Feed Scale [1]	350 TPH	MD-983
K-274	Kiln #1 Feed Transfer Pump [1]	65 TPH	None
K-401	Kiln #2 Baghouse	130 TPH	CT-1137, MD-245, AP-D66, AP-0819, MD-983, MD-6422A, MD-11793, AP-12398, letters 10/16/98, 7/31/06
K-410	Cement Kiln Dust Storage Silo	30 TPH	AP-437
K-438	Kiln #2 Dust Return Weigh Scale [1]	50 TPH	MD-983

SOURCE ID#	SOURCE DESCRIPTION	SIZE	CH. 6, SEC. 2 PERMITS/WAIVERS
K-515-1/ K-541-1	Clinker Cooler #2	62.5 TPH	CT-1137
K-521	Kiln #2 Coal Bin Dust Collector [1]	30 TPH	None
K-551	Coal Belt Dust Collector [1]	75 TPH	None
K-553	Coal Tunnel	75 TPH	CT-1137
K1-710	Kiln #1 Baghouse	65 TPH	CT-1137, MD-245, AP-D66, AP-0819, MD-983, MD-9022, MD-6642A, MD-11793, AP-12398, letters 10/16/98, 3/23/00
K1-783	Clinker Conveyor from Kiln #1	29 TPH	CT-1137
K1-880A/B	Clinker Cooler #1	29 TPH	CT-1137, MD-9022
R-016	Large Primary Crusher Dust Collector	600 TPH	MD-996
R-023	Small Primary Crusher Dust Collector	600 TPH	MD-996
R-111A	Raw Material Belt Discharge	200 TPH	CT-1137
R-230	Raw Silo #3 Bin	46 TPH	CT-1137
HTRS	9 Natural Gas Fired Heaters	(Btu/hr) (5) 350,000 (1) 500,000 (1) 175,000 (1) 40,000 (1) 35,000	None
None	Fugitives-roads, conveyors, kiln dust	NA	CT-562, MD-73
None	Storage-raw materials and clinker	NA	MD-73, MD-9022, **wv-15658 Corrected**

Particulate emissions from all sources are controlled by baghouses.
[1] Sources vent inside a building.

TOTAL FACILITY ESTIMATED EMISSIONS

For informational purposes only. These emissions are not to be assumed as permit limits.

POLLUTANT	EMISSIONS (TPY)
CRITERIA POLLUTANT EMISSIONS	
Particulate Matter	399
PM_{10} Particulate Matter	399
Sulfur Dioxide (SO_2)	876
Nitrogen Oxides (NO_X)	2,886
Carbon Monoxide (CO)	1,603
Volatile Organic Compounds (VOCs)	99
HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS	60

HAP's reflect actual emissions based on kiln testing performed April 2002 and hours of operation for 2002. Other emission estimates are from the operating permit application.

FACILITY-SPECIFIC PERMIT CONDITIONS

Facility-Wide Permit Conditions

(F1) FUGITIVE EMISSIONS [WAQSR Ch 6, Sec 2 Permits CT-562 and MD-73]

(a) All working areas subject to the movement of trucks, loaders and other heavy equipment, including the road used by the front-end loader to transport raw materials from the storage building to the truck dump, shall be treated with suitable chemical dust suppressants and/or water to prevent excessive fugitive emissions. The haul road to the limestone quarry shall be treated or surfaced with oil or other suitable chemicals and maintained on a continuous basis such that the treatment remains a viable control measure.

(b) The permittee shall maintain surfaced haul roads to the extent the surface treatment remains viable as a fugitive emissions control measure.

(c) The raw materials truck dump operated at the facility shall be enclosed or controlled by some other acceptable method approved by the Division to adequately control emissions.

(d) All conveyors and transfer points exposed to the open air shall be covered and maintained to emit negligible fugitive emissions.

(e) Cement kiln dust shall be recycled back into the kiln or raw material feed system or otherwise disposed of in a manner that will not create fugitive dust emissions.

(F2) RAW MATERIAL AND CLINKER STORAGE [WAQSR Ch 6, Sec 2 Permits/**Waiver** MD-73, MD-9022, **and wv-15658 Corrected**] **(Modified October 21, 2014)**

(a) No raw materials or clinker shall be stored in the open, except for the temporary storage allowed as specified in conditions F2(b) and (c).

(b) The Division will allow temporary outside storage of materials due to materials handling equipment breakdown. The permittee shall notify the Division of each such event within 24 hours of occurrence, to be followed in writing requesting permission to do so and stating the types of materials involved, amounts to be stockpiled, life of stockpile, and proposed method of controls.

(i) Adequate control measures, such as water or suitable chemical dust suppressants, shallbe used during periods of temporary outside storage of materials to prevent fugitive dust emissions from occurring due to wind erosion or equipment activity.

(c) The permittee shall limit the combined size of the temporary outside clinker storage piles authorized under Permit MD-9022 to the tonnage achieved as of January 1, 2011. **After** January 1, 2011 **an additional 40,000 tons of clinker may be added to the outside clinker storage pile. The clinker authorized to be added to the outside storage pile in this condition shall be screened clinker of 3/8 inch in size or greater. Once 40,000 tons of clinker has been added to the outside storage pile, the permittee is prohibited from adding additional clinker to the outside storage pile unless prior authorization is granted by the Division.**

(i) The temporary outside clinker storage piles described above shall be removed on or before April 12, 2015. Outside storage of clinker is not authorized at the Laramie Cement Plant once the temporary outside clinker storage piles have been removed.

(ii) The permittee shall follow the Operational Plan for Handling and Storage of Cement Clinker Outside, attached as Appendix A of this permit, for active work areas associated with the temporary outside clinker storage piles. Any revisions to the plan must be approved by the Division prior to implementation. Upon approval, the permitted shall submit the revised plan to the Division's operating permit program to administratively amend this permit.

(iii) Emissions reduction from the #1 kiln and clinker cooler shall be used to offset emissions from the addition and storage of clinker to the temporary outside clinker storage piles by not operating for at least one hour for every 30.8 tons of clinker added to the temporary outside clinker storage piles during the 2010 calendar year. The permittee shall maintain records as required by condition F20(e) to demonstrate compliance with this condition.

(F3) SULFUR DIOXIDE EMISSIONS INVENTORY [WAQSR Ch 14, Sec 3]

The permittee shall comply with the requirements of WAQSR Ch 14, Sec 3, including estimating SO_2 emissions in accordance with Ch 14 Sec 3(b), and adjusting estimates in accordance with Ch 14 Sec 3(c), if necessary.

Source-Specific Permit Conditions

(F4) VISIBLE EMISSIONS [WAQSR Ch 3, Sec 2; Ch 6, Sec 2 Permits/Waivers CT-1137, AP-437, AP-S10, MD-983, MD-996, AP-5557, MD-9022, MD-6642A, MD-11739; 40 CFR 60 Subpart Y and Subpart F]

(a) Emissions from the kiln #2 feed scale (K-224), kiln #2 dust return weigh scale (K-438), and railcar loadout (B-882) baghouses, the clinker reclaim tunnel vents (F-410), and the coal/iron ore and mill scale unloading building shall not exceed 10% opacity as determined by 40 CFR 60, Appendix A, Method 9.

(b) The 6-minute average opacity from the #1 and #2 kiln stacks (K1-710 and K-401) for any 6-minute block period shall not exceed 20% opacity.

(c) Emissions from the kiln #2 coal bin (K-521), coal belt transfer (K-551), and coal tunnel (K-553), shall not exhibit 20% opacity or greater.

(d) Visible emissions from the sources listed in Table I of this permit; the CKD spout; kiln #1 feed transfer (K-274); each raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system, shall notexceed 10% opacity.

(e) The permittee shall maintain all enclosures, the dust collectors, and the off-loading hopper structure, such that they remain effective means of controlling emissions from the primary crushing system.

(i) Visible emissions from the crusher's large and small dust collectors (R-016 and R-023) shall be limited to less than 7% opacity as determined by 40 CFR 60, Appendix A, Method 9.

(ii) Fugitive emissions from all equipment downstream of the off-loading hopper, which include all conveyors, crusher and all transfer points, shall be limited to less than 7% as determined by Method 9 of 40 CFR 60, Appendix A. The downstream equipment shall end after the transfer point onto the existing conveyor leading to storage.

(f) The inactive areas of the temporary outside clinker storage piles described in condition F2(c) shall be operated and maintained so the piles exhibit no visible emissions as determined by Method 22 of 40 CFR 60, Appendix A. The Division shall consider inactive areas to be portions of the temporary clinker storage piles which have had no activity for more than seven days.

(g) The active areas associated with the temporary outside clinker storage piles described in condition F2(c) shall be limited to 20% opacity as determined by Method 9 of 40 CFR 60, Appendix A.

(h) Biofuel (wood chips) shall be stored within a 3-sided enclosure, which includes a cover, to control fugitive emissions. The enclosure shall be inspected and maintained to the extent that fugitive emissions do not exceed 20% opacity as determined by Method 9 of 40 CFR 60, Appendix A.

(i) Visible emissions of any contaminant discharged into the atmosphere from any other single emission source shall not exhibit greater than 20% opacity except for one period or periods aggregating not more than six minutes in any one hour of not more than 40% opacity.

(F5) PARTICULATE EMISSIONS [WAQSR Ch 6, Sec 2 Permits/Waivers CT-1137, AP-437, AP-S10, MD-996, AP-5557, MD-11739; 40 CFR 60 Subpart F]

(a) Emissions of particulate matter from material handling dust collectors shall not exceed the limits specified in Table I. Sources listed in Table I are also subject to 40 CFR 63, Subpart LLL.

(b) Emissions of particulate matter from the coal tunnel (K-553) shall not exceed 0.43 lb/hour and 1.9 TPY.

(c) Emissions of particulate matter from the crusher's large dust collector (R-016) shall not exceed 0.01 gr/dscf and 0.7 lb/hour. Emissions of particulate matter from the crusher's small dust collector (R-023) shall not exceed 0.01 gr/dscf and 0.2 lb/hour.

Table I: Particulate Emission Limits				
Source ID#	Description	Particulate		
		gr/dscf (gr/acf)	lb/hr	TPY
B-694	West Cement Storage Silos Load-in		1.46	6.4
B-808	Bulk Cement Bucket Elevator, F-K Pump		0.43	1.9
B-816-A	No. 7 Cement Silo Load-in and Load-out		1.46	6.4
B-816-B	No. 8 Cement Silo Load-in		0.43	1.9
B-823	No. 8 Cement Silo Load-out		0.09	0.4
B-860	No. 11 Cement Silo Load-in		0.69	3.0
B-865	Truck Scale/No. 11 Cement Silo Load-out		0.77	3.4
B-870	West Packhouse, West Silos Load-out		1.13	5.0
B-875	East Packhouse, East Silos Load-out		1.13	5.0

Table I: Particulate Emission Limits				
Source ID#	Description	Particulate		
		gr/dscf (gr/acf)	lb/hr	TPY
B-912	Cement Storage Silo Nos. 9/10 Load-in	0.01	0.2	
B-954	Cement Storage Silo Nos. 9/10 Load-out	0.01	0.1	
F-405	Clinker Storage Load-in		0.62	2.7
F-406	Clinker Reclaim Transfer Tower		0.43	1.9
F-531	Finish Mill "A" System		4.37	19.1
F-540	Finish Mill "B" Feed	(0.01)	0.5	
F-544	Finish Mill "B" Vent	(0.02)	1.0	
F-550	Finish Mill "B" Discharge	(0.01)	0.5	
F-580	East Cement Storage Silos Load-in		0.78	3.4
F-776	Finish Mill "C"	0.008	0.8	
K1-106	Kiln #1 Dust Return Elevator		0.17	0.8
K-207-1	No. 1 Blending Silo		0.86	3.8
K-207-2	No. 2 Blending Silo		0.86	3.8
K-410	Cement Kiln Dust Storage Silo		0.31	1.35
K-515-1/K-541-1 (common stack with K1-880 A/B)	Clinker Cooler #2		9.80, and 0.10 lb/ton* of feed to the kiln (dry basis)	42.9
K1-783	Clinker Conveyor from Kiln #1		0.86	3.75
K1-880 A/B (common stack with K-515-1/K-541-1)	Clinker Cooler #1		4.53, and 0.10 lb/ton* of feed to the kiln (dry basis)	19.8
R-111A	Raw Material Belt Discharge		0.22	1.0
R-230	Raw Silo #3 Bin		0.22	1.0

* The 0.04 lb/ton limit under 40 CFR 63 Subpart LLL is more stringent

(F6) KILN STACK EMISSIONS [WAQSR Ch 6, Sec 2 Permits CT-1137 and MD-245; Division letters 3/23/00 and 7/31/06; 40 CFR 60 Subpart F]

(a) Emissions from the #1 and #2 kiln stacks (K1-710 and K-401) shall not exceed the limits specified in Table II of this permit.

(b) Emissions of SO_2 or NO_X from the #1 and #2 kiln stacks, as measured by the continuous emission monitoring systems required in condition F13(c), in excess of the limits stated below, other than emissions caused by unavoidable equipment malfunctions as qualified by condition G19 of this permit, shall constitute prima facie evidence that emissions from the facility exceedthe specified limits.

(c) The kilns are also subject to the emissions limits listed under condition F36 for the finish mill project.

TABLE II: Kiln Particulate, SO_2, NO_X, CO and VOC Emission Limits											
Source Description	Particulate			SO_2		NO_X		CO		VOC	
	lb/ton feed (dry basis)	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Kiln #1 (K1-710)	0.30	13.59	59.5	406.0 [1] 100.0 [2]	438.0	208.8 [2]	914.5	116.0	508.0	7.30	32.0
Kiln # 2 (K-401)	0.30	29.30	128.3	537.5 [1] 100.0 [2]	438.0	450.0 [2]	1971.0	250.0	1095.0	15.47	67.8

[1] Based on a rolling 3-hour average

[2] Based on a 30-day rolling hourly average

(F7) KILN PRODUCTION, FEED AND FUEL [WAQSR Ch 6, Sec 2 Permits/Waivers CT-1137, AP-D66, AP-0819, MD-983, MD-6642A, AP-12398, **AP-13877**, and Division 10/16/98 letter] **(Modified October 21, 2014)**

(a) The permittee shall record the daily clinker production rates and kiln feed rates. Raw materials used for the production of clinker shall be limited to **calcium filter cake**, limestone, shale, silica, iron ore or mill scale, spent alumina catalyst (SAC), iron dross, quarried stone high in iron (not including shale) and ferrous granules. (The raw materials truck dump shall be controlled in accordance with condition F1(c).

Cement kiln dust shall be recycled as required by condition F1(e). Notification of quarried stone/ferrous granules use is indicated under condition F26(d). **Without records of the "Beneficial Use Determination," as required by condition F22(c), the permittee is not allowed to store or use calcium filter cake at the facility.)**

(i) Any non-mineral raw material substitutions which the permittee wishes to use shall be evaluated on a case-by-case basis and approved by the Administrator prior to use.

(ii) The maximum amount of iron ore and mill scale that shall be hauled to the facility shall not exceed 25,000 TPY.

(iii) The maximum usage of SAC shallnot exceed 5 percent by weight of the total raw meal and the annual usage shall be limited to 50,000 tons.

(iv) SAC exhibiting Toxicity Characteristic Leaching Procedure (TCLP) metal concentrations in excess of regulatory limits cannot be used as a raw material without prior approval from the DEQ Solid and Hazardous Waste and Air Quality Divisions.

(b) The fuels authorized for kiln #1 and kiln #2 are biofuel (wood chips), petroleum coke, coal, and natural gas. Additionally, the permittee may burn petroleum contaminated clean up materials generated atthe facility that are non-hazardous as defined by the EPA. (Biofuel (wood chips) shall be stored within a 3-sided enclosure in accordance with condition F4(h)).

(F8) OTHER FUEL BURNING EQUIPMENT [WAQSR Ch 3, Sec 3]
NO_X emissions from each natural gas-fired heater (HTRS) shall not exceed 0.20 lb/MMBtu of heat input.

Testing Requirements

(F9) KILN, CLINKER COOLER, AND FINISH MILL EMISSIONS TESTING
[WAQSR Ch 6, Sec 3(h)(i)(C)(I); Ch 6, Sec 2 Permit MD-11739]

(a) For particulate, CO and VOC emissions, as applicable, from the #1 and #2 kiln stacks (K1-710 and K-401), and the #1 and #2 clinker coolers (K1-880A/B and K-515-1/K-541-1), the permittee shall measure emissions as follows for comparison with the limits specified in conditions F5 and F6:

(i) For particulate emissions from the kilns and clinker coolers, the permittee shall measure:

(A) Particulate emissions from the #2 kiln stack, at least every 12 months.

(B) Particulate emissions from the #1 kiln stack, the combined stack for the #1 and #2 clinker coolers, and the #1 clinker cooler baghouse, at least once every five years.

(C) The opacity from the kilns continuously during the testing to verify the validity of the compliance assurance monitoring parameters against particulate emissions.

(ii) The permittee shall measure CO emissions from each kiln stack at least once every 12 months.

(iii) The permittee shall measure VOC emissions from each kiln stack at least once every 12 months.

(iv) Emissions shall be measured using the methods described in condition F11.

(b) For particulate emissions from the finish mill "B" feed, vent, and discharge (F-540, F-544, F-550), and finish mill "C" (F-776), the permittee shall conduct testing as follows at least once every five years following completion of the initial performance test or the last periodic test

(i) Opacity testing shall follow the requirements of Method 9 and WAQSR Ch 5, Sec 2(i). If no visible emissions are observed during opacity testing, the opacity test can be used in lieu of particulate emission testing as a demonstration of compliance with the particulate emission limit in condition F5.

(ii) If any visible emissions are observed particulate testing shall be performed and shall consist of three 1-hour tests following EPA Reference Methods 1-5 and the requirements of 40 CFR Part 63, §63.1349(b). A test protocol shall be submitted for review and approval prior to testing. Notification of the test date shall be provided to the Division at least 15 days prior to the test date, and results submitted within 45 days of completion.

(iii) Clinker and gypsum throughput shall be monitored and recorded during eachtest run.

(iv) For the testing performed under paragraph (b)(i) and (ii) of this condition:

(A) The Division shall be notified within 24-hours of any testing showing operation outside the permitted limits, and upon observation of any visible emissions.

(B) By no later than seven calendar days of such testing/monitoring event, the owner or operator shall repair and retest/monitor the affected emission unit to demonstrate that the unit has been returned to operation within the permitted emission limits.

(C) Compliance with this condition regarding repair and retesting/monitoring shall not be deemed to limit the authority of the Division to cite the owner or operator for an exceedance of the permitted emission limits for any testing/monitoring required by this condition which shows noncompliance.

(c) The permittee shall comply with any testing required under40 CFR 63 Subpart LLL.

(d) Unless otherwise specified, testing shall be conducted in accordance with WAQSR Ch 5, Sec 2(h).

(F10) SPENT ALUMINA CATALYST TESTING [WAQSR Ch 6, Sec 2 Waiver AP-D66]
For spent alumina catalyst (SAC) used as kiln feed under condition F7(a)(iii), the permittee shall obtain a TCLP analysis for total metals from each source prior to shipment to the permittee's facility. SAC characterization must be conducted on a yearly basis and when changes in process occur at an SAC source facility.

(F11) ADDITIONAL EMISSIONS TESTING [W.S. 35-11-110]

(a) The Division reserves the right to require additional testing as provided under condition G1 of this permit. Should testing be required, test methods found at 40 CFR 60, Appendix A, shall be used as follows:

(i) For visible emissions, Method 9 shall be used.

(ii) For visible emissions from material handling and conveying system sources subject to 40 CFR 63 Subpart LLL which vent within a building, the alternative visible emission test approved by the EPA may be used. The alternative visible emission test is attached as Appendix B to this permit.

(iii) For particulate emissions from sources subject to 40 CFR 63 Subpart LLL, Methods 1-4 and 5, and the procedures specified in Subpart LLL shall be used.

(iv) For particulate emissions from the large and small dust collectors (R-016 and R-023), Method 5 or Method 17, and the procedures in 40 CFR 60 Subpart OOO, §60.675 shall be used.

(v) For particulate emissions from other sources, Methods 1-4 and 5 shall be used.

(vi) For D/F emissions from the kilns, Method 23 and the procedures described in Subpart LLL, §63.1349(b)(3) shall be used.

(vii) For SO_2 emissions sources, Methods 1-4 and 6 or 6C shall be used.

(viii) For NO_X emissions sources, Methods 1-4 and 7 or 7E shall be used.

(ix) For CO emission sources, Methods 1-4 and 10 shall be used.

(x) For VOC emission sources, Methods 1-4 and 25 shall be used.

(xi) For alternative test methods, or methods used for other pollutants, the approval of the Administrator must be obtained prior to using the test method to measure emissions

(b) Unless otherwise specified, testing shall be conducted in accordance with WAQSR Ch 5, Sec 2(h).

Monitoring Requirements

(F12) FUGITIVE, RAW MATERIAL & CLINKER STORAGE PILES EMISSIONS MONITORING [WAQSR Ch 6, Sec 3(h)(i)(C)(I)]

(a) For fugitive emissions:

(i) From working areas subject to the movementof trucks, loaders and other heavy equipment, the permittee shall monitor the dates and amounts of chemical dust suppressants and/or water applied, and road surface maintenance performed, to assess compliance with condition F1(a) and (b).

(ii) From the raw materials truck dump, on each day of active operation, the permittee shall monitor any fines cleaning and housekeeping activities performed to assess compliance with condition F1(c). (The permittee shall also conduct opacity monitoring in accordance with condition F15).

(iii) The permittee also shall monitor whether the cement kiln dust is recycled back into the kiln or raw material feed system, or if otherwise disposed of, to assess compliance with condition F1(e).

(b) For the temporary outside storage of materials, the permittee shall monitor the types of materials involved, amounts stockpiled, life of stockpile, and method of control, to assess compliance with condition F2(b). The permittee shall monitor the dates and amounts of water or chemical dust suppressants applied.

(c) For the temporary clinker storage pile limits and removal date indicated by condition F2(c), the permittee shall monitor the size of the temporary outside clinker stockpiles, type and amount of treatment/control applied to the active and inactive temporary outside clinker storage piles, and the location and dates of temporary clinker storage pile activity. To assess compliance with condition F4(f) and (g) for visible emissions, the permittee shall perform, at minimum, daily:

(i) A six-minute Method 22 test on each inactive clinker storage pile.
(ii) A six-minute Method 9 test on each active clinker storage pile.

(d) The permittee shall perform, at minimum, a weekly six-minute Method 9 test on the biofuel storage enclosure, to assess compliance with condition F4(h).

(F13) KILN EMISSIONS, FEED AND FUEL MONITORING [WAQSR Ch 5, Sec 2; Ch 6, Sec 2 Permit CT-1137 and MD-6642A; Ch 6, Sec 3(h)(i)(C)(I); Ch 7, Sec 3(c)(ii); and 40 CFR 63 Subpart LLL]

(a) For opacity from the #1 and #2 kiln stacks (K1-710 and K-401), the permittee shall calibrate, maintain, and operate continuous opacity monitoring systems (COMs) to measure the opacity of emissions discharged into the atmosphere, to assess compliance with condition F4(b). The monitoring systems shall comply with WAQSR Ch 5, Sec 2 and Performance Specification 1 of 40 CFR 60, Appendix B.

(b) For particulate emissions from the kiln #1 and kiln #2 baghouse controlled stacks, the permittee shall adhere to Compliance Assurance Monitoring (CAM) Plan B, attached as Appendix C to this permit, and shall conduct monitoring as follows, to assess compliance with condition F6:

(i) The permittee shall use the continuous opacity monitoring systems required by paragraph (a) of this condition, to monitor the opacity of emissions from each kiln stack on a continuous basis.
(ii) An excursion is any six-minute average opacity measurement greater than 20%. An excursion shall prompt immediate inspection and corrective action.
(iii) The permittee shall follow any other applicable requirements of conditions CAM-1 through CAM-4 of this permit.
(iv) The permittee shall also perform particulate emissions testing as required by condition F9(a). Following each test, the permittee shall evaluate the data from the test, together with data from previous testing, to determine if the indicator ranges in the CAM plan should be revised.

(c) For SO_2 and NO_X emissions from the kiln #1 and kiln #2 baghouse controlled stacks, the permittee shall operate and maintain SO_2 and NO_X continuous emissions monitoring systems (CEMs) in the kiln stacks to determine compliance with the allowable emissions rates set forth in condition F6. The permittee shall calculate and record SO_2 in lb/hr on a rolling 3-hour average, and SO_2 and NO_X in lb/hr on a 30 day rolling average. The monitoring systems shall comply with Performance Specification 2 (SO_2 and NO_X) of 40 CFR 60, Appendix B. In addition, the monitoring systems shall comply with the following:

(i) The system shall provide for zero (low-level value between 0 to 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in Appendix B. The system must allow the amount of excess zero and spandrift measured at the 24-hour interval checks to be recorded and quantified, whenever specified.
(ii) Except for system breakdown, repairs, calibration checks, and zero and span adjustments, the monitoring systems shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
(iii) The monitoring systems shall incorporate measurements capable of calculating the SO_2 and NO_X emission rates in units of the allowable emission rates (lb/hr). In lieu of a flow rate device, the permittee may submit for the Division's approval an alternative method for determining the mass emission rate.
(iv) In addition to the requirements of Performance Specification 2, the system must demonstrate linearity in accordance with Division requirements and be certified in both concentration (ppm) and units of the standard (lb/hr).
(v) The quality assurance requirements for the SO_2 and NO_X monitoring systems shall follow 40 CFR 60, Appendix F. Data accuracy assessment for the purpose of maintenance and operation of the monitoring systems shall consist of one cylinder gas audit per calendar quarter for three quarters of each operating year and one relative accuracy test audit per operating year.
(vi) The permittee shall follow the Quality Assurance Program most recently approved by the Division for the monitoring systems.

(d) For VOC and CO emissions from each kiln stack, the permittee shall perform testing as required under condition F9(a) to assess compliance with condition F6(a).

(e) The permittee shall monitor the daily clinker production rates and kiln feed rates. For the kiln feed limits, the permittee shall monitor and, as appropriate, keep calendar year running totals of the following to assess compliance with condition F7(a):

(i) The dates and amounts of iron ore and mill scale hauled to the facility.
(ii) The amounts and dates when spent alumina catalyst (SAC) is used as an alternative raw material and the percentage of SAC in the total raw meal.
(iii) The source, date, and volume of each shipment of SAC received.

(f) For the kiln fuel restrictions under condition F7(b), the permittee shall monitor the type of fuel used to ensure only the fuels specified in that condition are used as fuel sources for the kilns. The permittee shall monitor the percentage of biofuel and petroleum coke used in the coal/petroleum coke/ biofuel mixture burned in each kiln, and the amount of coal/petroleum coke/biofuel used as fuel each year.

(g) Monitoring of temperature for dioxins/furan (D/F) emissions is required by 40 CFR 63 Subpart LLL.

(h) The kilns are also subject to the monitoring requirements under condition F37 for the biofuel project.

(F14) CLINKER COOLER STACK MONITORING [WAQSR Ch 5, Sec 2; Ch 6, Sec 2 Permit CT-1137; and Ch 6, Sec 3(h)(i)(C)(I)]

(a) The permittee shall calibrate, maintain, and operate continuous opacity monitoring systems (COMs) to measure the opacity of emissions discharged into the atmosphere from the #1 (K1-880A/B) and #2 (K-515-1/ K-541-1) combined clinker coolers stack and the #1 clinker cooler stack. The COMs shall comply with WAQSR Chapter 5, Section 2 and Performance Specification 1 of 40 CFR 60, Appendix B.
(i) Average opacity for any 6-minute block period that exceeds 10 percent shall constitute a violation.

(b) The permittee shall perform the testing for particulate emissions from the clink cooler stacks as required by condition F9(a) for comparison with the emission limits specified in condition F5.

(F15) MATERIAL HANDLING SYSTEMS MONITORING [Ch 6, Sec 3(h)(i)(C)(I); 40 CFR 63 Subpart LLL]
Opacity from each truck dump; raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system, shall be monitored as specified in 40 CFR 63 Subpart LLL, to demonstrate compliance with conditions F1(c) and (d), and F4(a) and (d) (including sources K-224, K-438, F-410, B-882, CKD spout, and K-274).

(F16) BAGHOUSE EMISSIONS MONITORING [WAQSR Ch 6, Sec 3(h)(i)(C)(I); Ch 7, Sec 3(c)(ii); Ch 6, Sec 2 Permit MD-11739; and 40 CFR 63 Subpart LLL]
The permittee shall adhere to Compliance Assurance Monitoring (CAM) Plan A, attached as Appendix C to this permit, for particulate emissions from baghouse controlled equipment described under paragraphs (a) and (b), and shall conduct monitoring as follows to demonstrate compliance with conditions F4(a) and (d), and F5:

(a) The permittee shall conduct, at a minimum once daily, Method 22 visual observations of baghouses on finish mill sources F-531, F-540, F-544, F-550 and F-776, while the mills are operating at representative performance conditions, to determine the presence of visible emissions.
(i) The observations shall be conducted in accordance with 40 CFR 63, Subpart LLL.
(ii) An excursion, which is the presence of any visible emissions during any Method 22 testing, shall initiate, within one hour, the corrective actions specified in the site specific Operations and Maintenance Plan, attached as Appendix D to this permit. (Note: Although not part of the CAM plan, if visible emissions are observed, requirements under condition F16(d) and 40 CFR 63 Subpart LLL will apply).
(iii) The permittee shall also perform particulate emissions testing as required by condition F9(b) for the "B" and "C" mills (F-540, F-544, F-550 and F-776). The permittee shall perform visual observations during the test to verify that no visible emissions were present.

(b) The permittee shall conduct, at minimum once daily while the source is operating, Method 22-like visual observations of the remaining CAM units (B-694, B-808, B-816-A, B-816-B, B-823, B-860, B-865, B-870, B-875, B-912, B-954, F-405, F-406, F-580, K1-106, K-207-1, K-207-2, K-410, K-553, K1-783, R-016, R-023, R-111A, R-230) to determine the presence of visible emissions.
(i) The visual observations shall be conducted by a person who is educated on the procedures for determining the presence of visible emissions using Method 22 observations.
(ii) An excursion, which is the presence of visible emissions during any Method 22-like visual observation, shall initiate, within one hour, a six minute test of opacity in accordance with Method 9 of 40 CFR 60, Appendix A.
(iii) Observation of any visible emissions from any unit shall prompt immediate inspection and corrective action.

(iv) The permittee shall monitor all maintenance activities performed on all enclosures, the dust collectors, and the off-loading hopper structure from the primary crushing system to assess compliance with condition F4(e).

(c) The permittee shall follow all other applicable requirements of CAM-1 through CAM-4 of this permit.

(d) For the sources monitored under paragraph (a) of this condition, if visible emissions are observed, the permittee shall follow the requirements of 40 CFR 63 Subpart LLL.

(F17) OTHER FUEL BURNING EQUIPMENT EMISSIONS MONITORING [WAQSR Ch 6, Sec 3(h)(i)(C)(I)]
Periodic monitoring for visible emissions from the natural gas-fired heaters (HTRS) referenced in condition F8 shall consist of monitoring the type of fuel used to ensure natural gas is the sole fuel source for these units.

(F18) AMBIENT MONITORING NETWORK [WAQSR Ch 6, Sec 2 Permits MD-73 and MD-6642A]

(a) The permittee shall operate, in accordance with the requirements of 40 CFR parts 50 and 58, an approved ambient particulate monitoring network program at the plant to demonstrate compliance with the ambient particulate standards in WAQSR Ch 2, Sec 2. The ambient monitoring network shall consist of, at minimum, the following:

(i) An ambient particulate monitor and a PM_{10} monitor at the number one site located about 1200 feet north of the plant;

(ii) Two (collocated) PM_{10} monitors at the number two site located about 2400 feet east-northeast of the plant; and

(iii) A meteorological station located west of the plant.

(b) The permittee shall maintain and comply with the most recently Division approved quality assurance plan for the monitoring network as required by 40 CFR Part 58.

Recordkeeping Requirements

(F19) FUGITIVE, RAW MATERIAL & CLINKER STORAGE PILES RECORDS [WAQSR Ch 6, Sec 3(h)(i)(C)(II); Ch 6, Sec 2 Permit/**Waiver** MD-9022 **and wv-15658 Corrected] (Modified October 21, 2014)**

(a) For the monitoring required by condition F12(a), the permittee shall maintain records of:

(i) The dates and amounts of water/dust suppressant applied to roads and materials stored outside, road surface maintenance performed, and cleaning activities, to achieve compliance with conditions F1(a), (b) and (c).

(ii) Whether the dust has been recycled back into the kiln or raw material feed system to achieve compliance with condition F1(e). If otherwise disposed of, this shall be recorded along with measures taken to control fugitive dust emissions.

(b) For the monitoring required by condition F12(b), the permittee shall maintain records of any temporary outdoor storage of materials, correspondence with the Division, types of materials involved, actual amount stockpiled, life of the stockpile, and control methods, to assess compliance with condition F2(b).

(i) The permittee shall maintain records of the type, dates, and amounts of chemical dust suppressants and/or water applied.

(c) For the monitoring required by condition F12(c), the permittee shall maintain records of the size of the temporary outside clinker stockpiles, type and amount of treatment/control applied to the active and inactive temporary outside clinker storage piles, and location and dates of temporary clinker storage pile activity, to assess compliance with the limits and the removal date in condition F2(c).

(i) The permittee shall record any deviation from the Operational Plan for Handling and Storage of Cement Clinker Outside, attached as Appendix A of this permit, for active work areas associated with the temporary outside clinker storage piles.

(d) The permittee shall retain on-site at the facility all records kept in accordance with this condition for a period of at least five years from the date such records are generated.

(F20) TESTING AND MONITORING RECORDS
[WAQSR Ch 6, Sec 3(h)(i)(C)(II) and WAQSR Ch 6, Sec 2 Permits MD-996, MD-9022, MD-11739]

(a) For any testing or monitoring required under conditions F9, F10 and F11, other than Method 9 or Method 22 observations, the permittee shall record, as applicable, the following:

(i) The date, place, and time of sampling or measurements;

(ii) The date(s) the analyses were performed;

(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses;
(vi) The operating conditions as they existed at the time of sampling or measurement; and
(vii) Any corrective actions taken.
(viii) For condition F9(b) the clinker and gypsum throughput during each run.
(ix) For the particulate emissions testing required by condition F9(a), the permittee shall also record the CAM parameters as measured during testing, as well as the evaluation of indicator ranges required by condition F13(b)(iv).

(b) For any Method 9 observations required by conditions F11, F12(c)(ii) and F12(d), the permittee shall keep field records in accordance with Section 2.2 of Method 9 and shall document any corrective actions taken.

(c) For the Method 22 observations required by conditions F12(c)(i) and F16(a), the permittee shall keep field records in accordance with Sections 11.2 and 11.5 of Method 22 and shall document any corrective actions taken upon observing visible emissions.

(d) For the emissions offset specified under condition F2(c)(iii), the permittee shall maintain records of the operating hours of kiln #1 and the kiln #1 clinker cooler (and kiln #2 and kiln #2 clinker cooler if necessary) such that the Division can determine how long these units operated during the 2010 calendar year.

(e) For the CAM required under conditions F13(b), and F16(a) and (b), the permittee shall record the date, time, and duration of any excursions as well as the CAM indicator value(s) during each excursion.

(f) For the maintenance required under condition F16(b)(iv), the permittee shall maintain records of all maintenance activities performed on all enclosures, the dust collectors, and the off-loading hopper structure from the primary crushing system. The permittee shall record the dates, types of maintenance, and personnel who performed the maintenance.

(g) Records for dioxins/furan monitoring are described in 40 CFR 63 Subpart LLL.

(h) The kilns are also subject to the recordkeeping requirements under condition F38 for the biofuel project.

(i) The permittee shall retain on-site at the facility, the records of each test, measurement, or observation and support information for a period of at least five years from the date of such information.

(F21) ADDITIONAL CAM RECORDS [WAQSR Ch 6, Sec 3(h)(i)(C)(II); Ch 7, Sec 3(i)(ii)]

(a) For the CAM requirements in conditions F13(b), and F16(a) and (b), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to WAQSR Ch 7, Sec 3(h), any activities undertaken to implement a Quality Improvement Plan (QIP), and other supporting information required to be maintained under Ch 7, Sec 3.

(b) The permittee shall retain on-site at the facility, the records of each test, measurement, or observation and support information for a period of at least five years from the date such records are generated.

(F22) KILN PRODUCTION, FEED AND FUEL RECORDS [WAQSR Ch 6, Sec 2 Permits/Waivers CT-1137, AP-D66, MD-983, MD-6642A, **and AP-13877] (Modified October 21, 2014)**

(a) For the kiln monitoring required by condition F13(e), the permittee shall record the following:
(i) The dates and amount of iron ore and mill scale hauled to the facility.
(ii) The amount and dates when spent alumina catalyst (SAC) is used as an alternative raw material and the percentage of SAC in the total raw meal.
(iii) The source of SAC, date and volume received, and any analytical data associated with the SAC.
(iv) The daily clinker production rates and kiln feed rates.

(b) For the kiln fuel monitoring required by condition F13(f), the permittee shall record the percentage of biofuel (wood chips) and petroleum coke used in the coal/petroleum coke/biofuel mixture burned in each kiln, and the amount of coal/petroleum coke/biofuel used as fuel each year. The permitted shall record if any fuels other than those specified in condition F7(b) are used in the kilns.

(c) **The permittee shall maintain records demonstrating that the calcium filter cake raw material is an approved water treatment residual under the Solid and Hazardous Waste Division's (SHWD) "Beneficial Use Determination" for the facility. Without the "Beneficial Use Determination, the permittee is not allowed to use or store the calcium filter cake at the facility.**

(d) The permittee shall retain on-site at the facility all records kept in accordance with this condition for a period of at least five years from the date such records are generated.

(F23) CONTINUOUS OPACITY, SO_2 AND NO_X EMISSIONS MONITORING SYSTEMS RECORDS [WAQSR Ch 5, Sec 2 and Ch 6, Sec 2 Permit CT-1137]

(a) For the continuous opacity monitoring systems required by conditions F13(a) and F14(a), the permittee shall keep records in accordance with 40 CFR 63 Subpart LLL.

(b) The permittee shall maintain records of any periods during which the SO_2 or NO_X continuous emissions monitoring systems or monitoring devicesrequired by condition F13(c) are inoperative.

(i) The permittee shall maintain records of all measurements from the continuous emissions monitoring systems, performance testing measurements, performance audits, calibration checks, and maintenance performed on the systems in a permanent form suitable for inspection.

(c) The permittee shall retain on-site at the facility all records kept in accordance with this condition for a period of at least five years from the date such records are generated.

(F24) AMBIENT MONITORING NETWORK RECORDS [WAQSR Ch 6, Sec 3(h)(i)(C)(II)]

The permittee shall maintain records of the data generated by the ambient monitoring network such that compliance with condition F18 may be assessed. The permittee shall retain on-site at the facility all records kept in accordance with this condition for a period of at least five years from the date such records are generated.

(F25) SULFUR DIOXIDE EMISSIONS INVENTORY RECORDS [WAQSR Ch 14, Sec 3(b)]

(a) The permittee shall maintain all records used in the calculation of SO_2 emissions for the inventory required by condition F3, including but not limited to the following:

(i) Amount of fuel consumed;

(ii) Percent sulfur content of fuel and how the content was determined;

(iii) Quantity of product produced;

(iv) Emissions monitoring data;

(v) Operating data; and

(vi) How the emissions are calculated, including monitoring/estimation methodology with a demonstration that the selected methodology is acceptable under WAQSR Chapter 14, Section 3.

(b) The permittee shall maintain records of any physical changes to facility operations or equipment, or any other changes (e.g. raw material or feed) that may affect emissions projections of SO_2.

(c) The permittee shall retain all records and support information for compliance with this condition and with the reporting requirements of condition F32 at the facility, for a period of **at least ten years** from the date of establishment, or if the record was the basis for an adjustment to the milestone, five years after the date of an implementation plan revision, whichever is longer.

Reporting Requirements

(F26) TEST REPORTS, TCLP REPORTS, AND RAW MATERIAL STORAGE NOTIFICATIONS [WAQSR Ch 6, Sec 3(h)(i)(C)(III); Ch 6, Sec 2 Permits/Waivers MD-73, AP-D66, MD-11739, AP-12398] **(Modified October 21, 2014)**

(a) The permittee shall report the results of the emissions tests required under conditions F9 and F11 within 45 days of completing the tests.

(i) The reports shall include the information specified under condition F20(a) and (b), reference this condition (F26), and be submitted in accordance with condition G4 of this permit.

(b) Results of the TCLP analysis required under condition F10 shall be submitted to the DEQ Solid and Hazardous Waste and Air Quality Divisions for review prior to shipment from the SAC source facility.

(c) The permittee shall notify the Division within 24 hours of occurrence, each time an event results in outside storage of materials due to materials handling equipment breakdown, as required by condition F2(b). The 24-hour notification shall be followed up in writing, requesting permission for outside storage and stating the types of materials involved, amounts to be stockpiled, life of stockpile, and proposed method of controls.

(d) **The permittee shall notify the Division within 30 days of reaching the maximum additional tonnage allowed in the temporary outdoor clinker storage piles, as specified in condition F2(c). The notification shall include an estimate of the total size of the piles, in tons.**

(e) The permittee shall notify the Division, within 15 days of the start date, of the use of quarried stone high in iron (not including shale) or ferrous granules in the kilns.

(F27) SEMIANNUAL MONITORING REPORTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III) and Ch 7, Sec 3(i)]

(a) The following shall be reported to the Division by January 31 and July 31 each year:

(i) A summary of the dates and amount of water and dust suppressant applied, road surface maintenance, and cleaning activities, monitored in accordance with condition F12(a) and (c).

(ii) A summary of the dates and amounts of water or suitable chemical dust suppressants applied, monitored in accordance with condition F12(b). For condition F2(c)(i) the permittee shall submit verification of removal of each temporary storage pile and the date removed, with the first semiannual report submitted after removal.

(iii) Summary results of the opacity monitoring required under conditions F12(c)(i) and (ii), F12(d), and F15. Results included in the summary report required by 40 CFR 63 Subpart LLL may be referenced rather than repeated in this report.

(iv) Reporting requirements for condition F13(b), for CAM using continuous opacity monitors, are indicated under condition F28. Additionally, the results of CAM required under conditions F13(b), and F16(a) and (b) shall be included in the semiannual report, and include the following:

(A) Summary information on the number, duration, and cause of excursions, as applicable, and the corrective actions taken;

(B) Summary information on the number, duration, cause for monitor downtime incidents; and

(C) A description of the action taken to implement a QIP (if required) during the reporting period as specified in WAQSR Ch 7, Sec 3(h). Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has reduced the likelihood of similar excursions.

(v) Documentation the heaters (HTRS) referenced in condition F8 are firing natural gas as specified in condition F17.

(vi) A summary of the cement kiln dust monitoring required by condition F12(a)(iii). If the dust was disposed of by some means other than recycling, this shall be reported along with measures taken to control fugitive dust emissions.

(vii) A summary of maintenance performed under condition F12(b)(iv) on all enclosures, dust collectors, and the off-loading hopper structure from the primary crushing system to assess compliance with condition F4(e), including the dates, types of maintenance, and personnel who performed the maintenance.

(viii) Any deviations from the Operational Plan for Handling and Storage of Cement Clinker Outside, attached as Appendix A of this permit.

(b) All instances of deviations from the conditions of this permit must be clearly identified in each report, including the probable cause of such deviations and any corrective actions/preventative measures taken.

(c) The reports shall reference this condition (F27) and be submitted in accordance with condition G4 of this permit.

(F28) QUARTERLY CONTINUOUS OPACITY AND TEMPERATURE MONITORING REPORTS [WAQSR Ch 6, Sec 2 Permit CT-1137 and 40 CFR 63 Subpart LLL]

Within 30 days of the end of each calendar quarter, the permittee shall submit to the Division reports for the opacity and temperature monitoring systems required under conditions F13(a) and F14(a). Specific requirements are specified in 40 CFR 63 Subpart LLL.

(F29) QUARTERLY CONTINUOUS SO_2 AND NO_X MONITORING REPORTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III) and Ch 6, Sec 2 Permit CT-1137]

The permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in paragraph (b) of this condition) to the Administrator quarterly for SO_2 and NO_X emissions from Kiln #1 and Kiln #2 (K1-710 and K-401). All reports shall be in a format approved by the Division, and postmarked by the 30th day following the end of each calendar quarter. A separate written report shall be submitted for each pollutant, and shall include the following information:

(a) (i) The magnitude of excess emissions computed in accordance with WAQSR Chapter 5, Section 2(j)(viii), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

(ii) The operating time for each kiln during the reporting period.

(iii) Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, or malfunctions of kilns #1 and #2, the nature and cause of any malfunction (if known), and the corrective actions taken or preventative measures adopted.

(iv) The date and time identifying each period during which a continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(v) Identification of any daily 24-hour time period where available data from the monitoring system totals less than 18 hours. During periods of extended monitor downtime, an alternative monitoring method, accepted by the Administrator, may be used to collect data to demonstrate compliance with the SO_2 and NO_X emissions limits under condition F6 on a continuous basis.

(vi) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(vii) The results of the quarterly and yearly audits specified under condition F13(c)(v).

(viii) The average SO_2 and NO_X emissions, in lbs/hr, computed for each day of kiln operation, based on hourly average emission rates for the previous 30 days of operation.

(b) For the purpose of reporting under this condition, excess emissions are defined as:

(i) Any calculated three-hour rolling average of SO_2 emissions, as measured by the continuous monitoring system in accordance with condition F13(c) of this permit, which exceeds 406.0 lb/hr for Kiln #1 or 537.5 lb/hr for Kiln #2.

(ii) Any calculated 30-day rolling hourly average of SO_2 emissions, as measured by the continuous monitoring system in accordance with condition F13(c) of this permit, which exceeds 100.0 lb/hr for Kiln #1 or 100.0 lb/hr for Kiln #2.

(iii) Any calculated 30-day rolling hourly average of NO_X emissions, as measured by the continuous monitoring system in accordance with condition F13(c) of this permit, which exceeds 208.2 lb/hr for Kiln #1 or 450.0 lb/hr for Kiln #2.

(c) The reports shall reference this condition (F29) and be submitted in accordance with condition G4.

(F30) Reserved

(F31) QUARTERLY AMBIENT MONITORING NETWORK REPORTS [WAQSR Ch 6, Sec 2 Permit MD-6642A]

(a) The data generated by the ambient particulate monitoring network required by condition F18 shall be submitted to the Division in an approved format on a quarterly basis, within 60 days following the end of each quarter.

(b) The permittee shall notify the Division within 15 days of a monitored exceedance at any of the TEOM monitors and within 30 days of a monitored exceedance at any filter based monitor in the ambient particulate monitoring network at the Laramie Cement Plant.

(c) Ambient monitoring network reports shall reference this condition (F31) and be submitted in accordance with condition G4 of this permit. A copy of each report shall also be submitted to the Division's Ambient Monitoring Program.

(F32) ANNUAL SULFUR DIOXIDE EMISSIONS INVENTORY REPORTS [WAQSR Ch 14, Sec 3(b) and (c)] **(Modified October 21, 2014)**

(a) The permittee shall report calendar year SO_2 emissions by April 15th of the following year. The inventory shall be submitted in the format specified by the Division.

(b) Emissions from startup, shutdown, and upset conditions shall be included in theinventory.

(c) If the permittee uses a different emission monitoring or calculation method than was used to report SO_2 emissions in **2006**, the permittee shall adjust reported SO_2 emissions to be comparable to the emission monitoring or calculation method that was used in **2006**. The calculations that are used to make this adjustment shall be included with the annual emission report.

(d) The reports shall reference this condition (F32) and be submitted in accordance with condition G4.

(F33) ANNUAL KILN FEED, AND FUEL REPORTS [WAQSR Ch 6, Sec 2 Permit MD-6642A]

(a) The permittee shall submit the following to the Division, with the annual emission inventory required under condition G9 of this permit, for the previous calendar year:

(i) For the kiln feed monitoring required by condition F13(e), the totals of each type of raw material used.

(ii) For the kiln fuel monitoring under condition F13(f), the percentage of biofuel and petroleum coke used in the coal/petroleum coke/biofuel mixture burned in each kiln, and the amount of coal/petroleum coke/biofuel used as fuel for the calendar year. The permittee shall also report if any fuels other than those specified in condition F7(b) are used in the kilns.

(b) The reports shall reference this condition (F33) and be submitted in accordance with condition G4.

(c) The kilns are also subject to the reporting requirements under condition F39 for the biofuel project.

(F34) GREENHOUSE GAS REPORTS [W.S. 35-11-110]

The permittee shall submit to the Division a summary of any report(s) required to be submitted to the EPA under 40 CFR Part 98.

(a) The reports shall be submitted to the Division within 60 days of submission to EPA, in a format as specified by the Division.

(b) The reports shall be submitted in accordance with condition G4(a)(i) of this permit, to the attention of the Division's Emission Inventory Program. A copy need not be sent to the DEQ Air Quality contact

(F35) REPORTING EXCESS EMISSIONS & DEVIATIONS FROM PERMIT REQUIREMENTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III)]

(a) General reporting requirements are described under the General Conditions of this permit. The Division reserves the right to require reports as provided under condition G1 of this permit.

(b) Emissions which exceed the limits specified in this permit and which are not reported under a different condition of this permit shall be reported annually with the emission inventory unless specifically superseded by condition G17, condition G19, or other condition(s) of this permit. The probable cause of such exceedance, the duration of the exceedance, the magnitude of the exceedance, and any corrective actions or preventative measures taken shall be included in this annual report. For sources and pollutants which are not continuously monitored, if at any time emissions exceed the limits specified in this permit by 100 percent, or if a single episode of emission limit exceedance spans a period of 24 hours or more, such exceedance shall be reported to the Division within one working day of the exceedance. (Excess emissions due to an emergency shall be reported as specified in condition G17. Excess emissions due to unavoidable equipment malfunction shall be reported as specified in condition G19.)

(c) Any other deviation from the conditions of this permit shall be reported to the Division in writing within 30 days of the deviation or discovery of the deviation.

PSD (Prevention of Significant Deterioration) Applicability Demonstration Requirements

(F36) PROJECT EMISSION LIMITS [WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739]

(a) The permittee shall track actual emissions from kiln #1 (K1-710) and kiln #2 (K-401), to demonstrate that the biofuel project described in permit MD-6642A, and the finish mill project described in permit MD-11739, do not result in a major modification under Ch 6, Sec 4 of the WAQSR.

(b) The sum of the actual emissions, on a calendar year basis, from kiln #1 and kiln #2 shall not exceed the following emission levels, shown in Table III. The emission limits set forth in valid air quality permits for these sources shall remain in effect.

Table III
Emission Levels for Biofuel and Finish Mill Projects

Pollutant	TPY
$PM/PM_{10}/PM_{2.5}$	135
SO_2	289
NO_X	2622
CO	1204
VOC	99.8
Fluorides (F)	3.4
Lead (Pb)	0.80

(F37) PROJECT EMISSIONS MONITORING [WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739]

Actual emissions from kiln #1 and kiln #2 shall be determined using the methodologies attached as Appendix E to this permit, unless an alternate method is approved by the Division

(F38) PROJECT RECORDKEEPING REQUIREMENTS [WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739]
The permittee shall monitor emissions in accordance with the requirements of condition F37, and shall calculate and maintain a record of the annual emissions in tons per year, on a calendar year basis, for a period of 5 years following resumption of regular operations after the changes. For purposes of this condition, the five year period will start at the beginning of calendar year 2012.

(F39) REPORTING REQUIREMENTS [WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739]
The permittee shall submit a report to the Division, within 60 days after the end of each calendar year, showing the calendar year total actual emissions for each pollutant listed in condition F36 for kiln #1 and kiln #2. The annual reports shall reference this permit condition (F39) and be submitted to the Division in accordance with condition G4.

(F40) PROJECT COMPLETION CONDITIONS [WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739]
Upon submissions of the report required by condition F39 for calendar year 2016, the requirements of conditions F36 through F39 shall expire, except that the records required by condition F38 shall be maintained for a period of at least five years from the date such records are generated and the records shall be made available to the Division upon request.

WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND 40 CFR 60 SUBPART F REQUIREMENTS FOR PORTLAND CEMENT PLANTS

SUBPART F REQUIREMENTS [40 CFR Part 60 Subparts A and F, and WAQSR Ch 5, Sec 2]
The permittee shall meet all applicable requirements of 40 CFR Part 60 Subparts A and F, and WAQSR Ch 5, Sec 2, as they apply to the affected facilities as defined under §60.60 for Portland Cement plants, including: kilns, clinker coolers, raw mill systems, finish mill systems, raw mill dryers, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.

The subpart is available at http://www.gpoaccess.gov/cfr/retrieve.html, or is available from the Division upon request.

WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND 40 CFR 60 SUBPART Y REQUIREMENTS FOR COAL PREPARATION PLANTS

SUBPART Y REQUIREMENTS [40 CFR Part 60 Subparts A and Y, and WAQSR Ch 5, Sec 2]
The permittee shall meet all applicable requirements of 40 CFR Part 60 Subparts A and Y, and WAQSR Ch 5, Sec 2 as they apply to the affected facilities as defined under §60.250 in coal preparation plants which process more than 181 Mg (200 tons) per day, including: thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems, and open storage piles, including sources K-553, K-551, and K-521.

The subpart is available at http://www.gpoaccess.gov/cfr/retrieve.html, or is available from the Division upon request.

WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND 40 CFR 60 SUBPART OOO REQUIREMENTS FOR NONMETALLIC MINERAL PROCESSING PLANTS

SUBPART OOO REQUIREMENTS [40 CFR 60 Subparts A and OOO; and WAQSR Ch 5, Sec 2]
The permittee shall meet all applicable requirements of 40 CFR 60 Subparts A and OOO and WAQSR Ch 5, Sec 2 as they apply to affected facilities in fixed or portable nonmetallic mineral processing plants (each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station that commenced construction, modification, or reconstruction after August 31, 1983), as defined under §60.670, including the large and small dust collectors (R-016 and R-023) on the crusher.

The subpart is available at http://www.gpoaccess.gov/cfr/retrieve.html, or is available from the Division upon request.

WAQSR CHAPTER 5, SECTION 3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS) AND 40 CFR 63 SUBPART LLL REQUIREMENTS FOR THE PORTLAND CEMENT MANUFACTURING INDUSTRY

SUBPART LLL REQUIREMENTS [40 CFR 63 Subparts A and LLL, and WAQSR Ch 5, Sec 3]
The permittee shall meet all applicable requirements of 40 CFR 63 Subparts A and LLL, and WAQSR Ch 5, Sec 3 as they apply to each new and existing Portland Cement plant. Affected sources, as defined in §63.1340, include each kiln and in-line kiln/raw mill; clinker cooler; raw mill; finish mill; raw material dryer; raw material, clinker, or finished product storage bin; conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln; and bagging and bulk loading and unloading system. Affected sources at this facility include kiln #1 (K1-710), kiln #2 (K-401), any open clinker storage piles, and the sources designated under conditions F4(a) and (d).

The subpart is available at http://www.gpoaccess.gov/cfr/retrieve.html, or is available from the Division upon request.

WAQSR CHAPTER 7, SECTION 3
COMPLIANCE ASSURANCE MONITORING (CAM) REQUIREMENTS

(Modified October 21, 2014)

(CAM-1) COMPLIANCE ASSURANCE MONITORING REQUIREMENTS [WAQSR Ch 7, Sec 3(b) and (c)]
The permittee shall follow the CAM plan attached as Appendix C to this permit and meet all CAM requirements of WAQSR Chapter 7, Section 3 as they apply to the particulate emissions from the applicable baghouse controlled equipment (sources K1-710, K-401, F-531, F-540, F-544, F-550, F-776, R-111A, R-230 if used, K-207-1, K-207-2, K-553, K-410, K1-106, K1-783, F-405, F-406, B-808, F 580, B-694, B-875, B-870, B-816-A, B-816-B, B-823, B-860, B-865, B-912, B-954, R-016 and R-023). Compliance with the source specific monitoring, recordkeeping, and reporting requirements of this permit meets the monitoring, recordkeeping, and reporting requirements of WAQSR Chapter 7, Section 3, except for additional requirements specified under conditions CAM-2 through CAM-4.

(CAM-2) OPERATION OF APPROVED MONITORING [WAQSR Ch 7, Sec 3(g)]

(a) At all times, the permittee shall maintain the monitoring under this section, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(b) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities, the permittee shall conduct all monitoring in continuous operation (or at all required intervals) at all times that the pollutant specific emissions unit is operating.

(c) Upon detecting an excursion, the permittee shall restore operation of the pollutant-specific emission unit to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices. The response shall include minimizing the period of any start-up, shutdown or malfunction and taking any corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion.

(d) If the permittee identifies a failure to achieve compliance with an emission limit for which the monitoring did not provide an indication of an excursion while providing valid data, or the results of compliance or performance testing documents a need to modify the existing indicator ranges, the permittee shall promptly notify the Division and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes.

(CAM-3) QUALITY IMPROVEMENT PLAN (QIP) REQUIREMENTS [WAQSR Ch 7, Sec 3(h)]

(a) If the Division or the EPA Administrator determines, based on available information, that the permittee has used unacceptable procedures in response to an excursion or exceedance, the permittee may be required to develop and implement a Quality Improvement Plan (QIP).

(b) If required, the permittee shall maintain a written Quality Improvement Plan (QIP) and have it available for inspection.

(c) The plan shall include procedures for conducting one or more of the following:
   - (i) Improved preventative maintenance practices.
   - (ii) Process operation changes.
   - (iii) Appropriate improvements to control methods.
   - (iv) Other steps appropriate to correct control.
   - (v) More frequent or improved monitoring (in conjunction with (i)- (iv) above).

(d) If a QIP is required, the permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(e) Following implementation of a QIP, upon any subsequent determination under paragraph (a) above, the Division may require the permittee to make reasonable changes to the QIP if the QIP failed to address the cause of control device problems, or failed to provide adequate procedures for correcting control device problems as expeditiously as practicable.

(f) Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limit(s) or any existing monitoring, testing, reporting, or recordkeeping requirements that may be applicable to the facility.

(CAM-4) SAVINGS PROVISIONS [WAQSR Ch 7, Sec 3(j)]
Nothing in the CAM regulations shall excuse the permittee from compliance with any existing emission limit or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may be applicable to the facility.

COMPLIANCE CERTIFICATION AND SCHEDULE

(Modified October 21, 2014)

Compliance Certification [WAQSR Ch 6, Sec 3(h)(iii)(E)]

(C1) (a) The permittee shall submit by January 31 each year a certification addressing compliance with the requirements of this permit. The certification shall be submitted as a stand-alone document separate from any monitoring reports required under this permit.

(b) (i) For minimizing fugitive emissions from work areas and roads, raw material truck dumps, and cement kiln dust recycling, the permittee shall assess compliance with condition F1(a), (b), (c) and (e) by conducting monitoring required by condition F12(a).

(ii) For visible fugitive emissions from raw material truck dumps, and conveyors and transfer points, the permittee shall assess compliance with conditions F1(c) and (d) by conducting the monitoring required by condition F15.

(iii) For fugitive emissions from outside material storage, the permittee shall assess compliance with condition F2(a) and (b) by conducting the monitoring required by condition F12(b), and reviewing the records required by condition F19(b).

(iv) For temporary outside clinker storage piles, the permittee shall assess compliance with condition F2(c), by conducting the monitoring required by condition F12(c), and reviewing the records required by condition F19(c).

(v) For the sulfur dioxide emissions inventory, the permittee shall assess compliance with condition F3 by reviewing records kept in accordance with condition F25 and verifying reports were submitted in accordance with condition F32.

(vi) For visible emissions from the sources referenced in condition F4(a), the permittee shall assess compliance by conducting the monitoring required by condition F15.

(vii) For visible emissions from each kiln stack, the permittee shall assess compliance with condition F4(b) by conducting monitoring required by condition F13(a).

(viii) For visible emissions from coal handling sources, the permittee shall assess compliance with condition F4(c) by conducting monitoring required by condition F16(b) and (e).

(ix) For visible emissions from conveyors and transfer points; raw material, clinker, or finished product storage bins; bagging systems; and bulk loading or unloading systems, the permittee shall assess compliance with condition F4(d), except for the clinker coolers, by conducting the monitoring required by conditions F15 and F16(a)-(c).

(x) For visible emissions from the clinker coolers, the permittee shall assess compliance with condition F4(d) by conducting the monitoring required by condition F14(a).

(xi) For visible emissions from the crusher's large and small dust collectors (R-016 and R-023), the permittee shall assess compliance with condition F4(e) by conducting the monitoring and maintenance required by condition F16(b).

(xii) For visible emissions from the temporary outside clinker storage piles, the permittee shall assess compliance with condition F4(f) and (g) by conducting the monitoring required by condition F12(c)(i) and (ii).

(xiii) For visible emissions from the biofuel storage enclosure, the permittee shall assess compliance with condition F4(h) by conducting the monitoring required by condition F12(d).

(xiv) For visible emissions from the heaters, the permittee shall assess compliance with condition F4(i) by verifying natural gas was the sole fuel source as specified in condition F17.

(xvii) For particulate emissions from the clinker coolers, the permittee shall assess compliance with condition F5(a) by conducting testing required by condition F9(a).

(xv) For particulate emissions from the "B" and "C" mills, the permittee shall assess compliance with condition F5(a) by conducting the testing required by condition F9(b), and CAM according to condition F16(a).

(xvi) For particulate emissions from the other baghouses in Table I, the permittee shall assess compliance with condition F5(a)-(c) by conducting CAM required by condition F16(a) and (b).

(xvii) For particulate, CO, and VOC emissions from the #1 and #2 kiln stacks, the permittee shall assess compliance with condition F6(a) by conducting the testing required by condition F9(a), and in addition for particulate emissions, CAM according to condition F13(b).

(xviii) For SO_2 and NO_X emissions from the #1 and #2 kiln stacks, the permittee shall assess compliance with condition F6(a) by conducting monitoring required by condition F13(c).

(xix) For clinker production and kiln feed limitations, the permittee shall assess compliance with condition F7(a) by conducting testing required by condition F10, monitoring required by condition F13(e) and (f), **and reviewing records kept in accordance with condition F22(c).**

(xx) For kiln fuel limitations, the permittee shall assess compliance with condition F7(b) by conducting monitoring required by condition F13(f).

(xxi) For ambient particulate monitoring, the permittee shall assess compliance with condition F18 by reviewing records kept in accordance with condition F24.

(xxii) For greenhouse gas reporting, the permittee shall assess compliance with condition F34 by verifying that reports were submitted in accordance with condition F34(b).

(xxiii) For the biofuel project, the permittee shall assess compliance with condition F36 by conducting monitoring required by condition F37 and reviewing records required by condition F38.

(xxiv) The permittee shall assess compliance with 40 CFR 60 Subpart F requirements by conducting any testing and monitoring required by §60.63, and reviewing any records required by §60.65.

(xxv) The permittee shall assess compliance with 40 CFR Part 60 Subpart Y by conducting any testing and monitoring required by §§60.255 and 60.256, and by reviewing any records required by §60.258.

(xxvi) The permittee shall assess compliance with 40 CFR Part 60 Subpart OOO by conducting any testing and monitoring required by §§60.674 and 60.675, and by reviewing any records required by §60.676.

(xxvii) The permittee shall assess compliance with 40 CFR 63 Subpart LLL requirements by conducting any testing and monitoring required by §§63.1348 - 63.1350, and by reviewing any records required by §63.1355.

(c) The compliance certification shall include:

(i) The permit condition or applicable requirement that is the basis of the certification;

(ii) The current compliance status;

(iii) Whether compliance was continuous or intermittent; and

(iv) The methods used for determining compliance.

(d) For any permit conditions or applicable requirements for which the source is not in compliance, the permittee shall submit with the compliance certification a proposed compliance plan and schedule for Division approval.

(e) The compliance certification shall be submitted to the Division in accordance with condition G4 of this permit and to the Assistant Regional Administrator, Office of Enforcement, Compliance, and Environmental Justice (8ENF-T), U.S. EPA - Region VIII, 1595 Wynkoop Street, Denver, CO 80202-1129.

(f) Determinations of compliance or violations of this permit are not restricted to the monitoring requirements listed in paragraph (b) of this condition; other credible evidence may be used.

<u>Compliance Schedule</u> [WAQSR Ch 6, Sec 3(h)(iii)(C) and (D)]

(C2) The permittee shall continue to comply with the applicable requirements with which the permittee has certified that it is already in compliance.

(C3) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.

GENERAL PERMIT CONDITIONS

Powers of the Administrator: [W.S. 35-11-110]

(G1) (a) The Administrator may require the owner or operator of any point source to complete plans and specifications for any application for a permit required by the Wyoming Environmental Quality Act or regulations made pursuant thereto and require the submission of such reports regarding actual or potential violations of the Wyoming Environmental Quality Act or regulations thereunder.

(b) The Administrator may require the owner or operator of any point source to establish and maintain records; make reports; install, use and maintain monitoring equipment or methods; sample emissions, or provide such other information as may be reasonably required and specified.

Permit Renewal and Expiration: [WAQSR Ch 6, Sec 3(c)(i)(C), (d)(ii), (d)(iv)(B), and (h)(i)(B)] [W.S. 35-11-206(f)]

(G2) This permit is issued for a fixed term of five years. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted at least six months prior to the date of permit expiration. If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit is not a violation of WAQSR Chapter 6, Section 3 until the Division takes final action on the renewal application. This protection shall cease to apply after a completeness determination if the applicant fails to submit by the deadline specified in writing by the Division any additional information identified as being needed to process the application.

Duty to Supplement: [WAQSR Ch 6, Sec 3(c)(iii)]

(G3) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after this permit is issued.

Submissions: [WAQSR Ch 6, Sec 3(c)(iv)] [W.S. 35-11-206(c)]

(G4) Any document submitted shall be certified as being true, accurate, and complete by a responsible official.

(a) Submissions to the Division.

(i) Any submissions to the Division including reports, certifications, and emission inventories required under this permit shall be submitted as separate, stand-alone documents and shall be sent to:

Administrator, Air Quality Division
122 West 25th Street
Cheyenne, Wyoming 82002

(ii) Unless otherwise noted elsewhere in this permit, a copy of each submission to the Administrator under paragraph (a)(i) of this condition shall be sent to the DEQ Air Quality Contact listed on page 3 of this permit.

(b) Submissions to EPA.

(i) Each certification required under condition C1 of this permit shall also be sent to:

Assistant Regional Administrator
Office of Enforcement, Compliance, and Environmental Justice (8ENF-T)
U.S. EPA - Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129.

(ii) All other required submissions to EPA shall be sent to:

Office of Partnerships and Regulatory Assistance
Air and Radiation Program (8P-AR)
U.S. EPA - Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Changes for Which No Permit Revision Is Required: [WAQSR Ch 6, Sec 3(d)(iii)]

(G5) The permittee may change operations without a permit revision provided that:

(a) The change is not a modification under any provision of title I of the Clean Air Act;

(b) The change has met the requirements of Chapter 6, Section 2 of the WAQSR and is not a modification under Chapter 5, Section 2 or Chapter 6, Section 4 of the WAQSR and the changes do not exceed the emissions allowed under the permit (whether expressed therein as a rate of emissions or in terms of total emissions); and

(c) The permittee provides EPA and the Division with written notification at least 14 days in advance of the proposed change. The permittee, EPA, and the Division shall attach such notice to their copy of the relevant permit. For each such change, the written notification required shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield, if one exists for this permit, shall not apply to any such change made.

Transfer of Ownership or Operation: [WAQSR Ch 6, Sec 3(d)(v)(A)(IV)]

(G6) A change in ownership or operational control of this facility is treated as an administrative permit amendment if no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Division.

Reopening for Cause: [WAQSR Ch 6, Sec 3(d)(vii)] [W.S. 35-11-206(f)(ii) and (iv)]

(G7) The Division will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

(a) Additional applicable requirements under the Clean Air Act or the WAQSR that become applicable to this source if the remaining permit term is three or more years. Such reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended.

(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit.

(c) The Division or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

(d) The Division or EPA determines that the permit must be revised or revoked to assure compliance with applicable requirements.

Annual Fee Payment: [WAQSR Ch 6, Sec 3(f)(i), (ii), and (vi)] [W.S. 35-11-211]

(G8) The permittee shall, as a condition of continued operations, submit an annual fee to the Division as established in Chapter 6, Section 3 (f) of the WAQSR. The Division shall give written notice of the amount of fee to be assessed and the basis for such fee assessment annually. The assessed fee is due on receipt of the notice unless the fee assessment is appealed pursuant to W.S. 35-11-211(d). If any part of the fee assessment is not appealed it shall be paid to the Division on receipt of the written notice. Any remaining fee which may be due after completion of the appeal is immediately due and payable upon issuance of the Council'sdecision. Failure to pay fees owed the Division is a violation of Chapter 6, Section 3 (f) and W.S. 35-11-203 and may be cause for the revocation of this permit.

Annual Emissions Inventories: [WAQSR Ch 6, Sec 3(f)(v)(G)]

(G9) The permittee shall submit an annual emission inventory for this facility to the Division for fee assessment and compliance determinations within 60 days following the end of the calendar year. The emissions inventory shall be in a format specified by the Division.

Severability Clause: [WAQSR Ch 6, Sec 3(h)(i)(E)]

(G10) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Compliance: [WAQSR Ch 6, Sec 3(h)(i)(F)(I) and (II)] [W.S. 35-11-203(b)]

(G11) The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act, Article 2 of the Wyoming Environmental Quality Act, and the WAQSR and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

Permit Actions: [WAQSR Ch 6, Sec 3(h)(i)(F)(III)] [W.S. 35-11-206(f)]

(G12) This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Property Rights: [WAQSR Ch 6, Sec 3(h)(i)(F)(IV)]

(G13) This permit does not convey any property rights of any sort, or any exclusive privilege.

Duty to Provide Information: [WAQSR Ch 6, Sec 3(h)(i)(F)(V)]

(G14) The permittee shall furnish to the Division, within a reasonable time, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permit, including information claimed and shown to be confidential under W.S. 35-11-1101 (a) of the Wyoming Environmental Quality Act. Upon request by the Division, the permittee shall also furnish confidential information directly to EPA along with a claim of confidentiality.

Emissions Trading: [WAQSR Ch 6, Sec 3(h)(i)(H)]

(G15) No permit revision is required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

Inspection and Entry: [WAQSR Ch 6, Sec 3(h)(iii)(B)] [W.S. 35-11-206(c)]

(G16) Authorized representatives of the Division, upon presentation of credentials and other documents as may be required by law, shall be given permission to:

- (a) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
- (c) inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) sample or monitor any substances or parameters at any location, during operating hours, for the purpose of assuring compliance with this permit or applicable requirements.

Excess Emissions Due to an Emergency: [WAQSR Ch 6, Sec 3(l)]

(G17) The permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency, as defined in Ch 6, Sec 3(l)(i) of the WAQSR. To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) an emergency occurred and that the permittee can identify the cause(s) of the emergency;
- (b) the permitted facility was, at the time, being properly operated;
- (c) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit;

(d) The permittee submitted notice of the emergency to the Division within one working day of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

Diluting and Concealing Emissions: [WAQSR Ch 1, Sec 4]

(G18) No person shall cause or permit the installation or use of any device, contrivance, or operational schedule which, without resulting in reduction of the total amount of air contaminant released tothe atmosphere, shall dilute or conceal an emission from a source. This condition shall not apply to the control of odors.

Unavoidable Equipment Malfunction: [WAQSR Ch 1, Sec 5]

(G19) (a) Any source believing that any emissions in excess of established regulation limits or standards resulted from an unavoidable equipment malfunction, shall notify the Division within 24 hours of the incident via telephone, electronic mail, fax, or other similar method. A detailed description of the circumstances of the incident as described in paragraph 5(a)(i)(A) Chapter 1, including a corrective program directed at preventing future such incidents, must be submitted within 14 days of the onset of the incident. The Administrator may extend this 14-day time period for cause.

(b) The burden of proof is on the owner or operator of the source to provide sufficient information to demonstrate that an unavoidable equipment malfunction occurred.

Fugitive Dust: [WAQSR Ch 3, Sec 2(f)]

(G20) The permittee shall minimize fugitive dust in compliance with standards in Ch 3, Sec 2(f) of WAQSR for construction/demolition activities, handling and transportation of materials, and agricultural practices.

Carbon Monoxide: [WAQSR Ch 3, Sec 5]

(G21) The emission of carbon monoxide in stack gases from any stationary source shall be limited as may be necessary to prevent ambient standards from being exceeded.

Asbestos: [WAQSR Ch 3, Sec 8]

(G22) The permittee shall comply with emission standards for asbestos during abatement, demolition, renovation, manufacturing, spraying and fabricating activities.

(a) No owner or operator shall build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous dilutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specified size.

(b) All owners and operators conducting an asbestos abatement project, including an abatement project on a residential building, shall be responsible for complying with Federal requirements and State standards for packaging, transportation, and delivery to an approved waste disposal facility as provided in paragraph (m) of Ch 3, Sec 8.

(c) The permittee shall follow State and Federal standards for any demolition and renovation activities conducted at this facility, including:

(i) A thorough inspection of the affected facility or part of the facility where the demolition or renovation activity will occur shall be conducted to determine the presence of asbestos, including Category I and Category II non-friable asbestos containing material. The results of the inspection will determine which notification and asbestos abatement procedures are applicable to the activity.

(ii) The owner or operator shall follow the appropriate notification requirements of Ch 3, Sec 8(i)(ii).

(iii) The owner or operator shall follow the appropriate procedures for asbestos emissions control, as specified in Chapter 3, Section 8(i)(iii).

(d) No owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this paragraph do not apply to spray-applied insulating materials regulated under paragraph (j) of Ch 3, Sec 8.

(e) The permittee shall comply with all other requirements of WAQSR Ch 3, Sec 8.

Open Burning Restrictions: [WAQSR Ch 10, Sec 2]

(G23) The permittee conducting an open burn shall comply with all rules and regulations of the Wyoming Department of Environmental Quality, Division of Air Quality, and with the Wyoming Environmental Quality Act.

(a) No person shall burn prohibited materials using an open burning method, except as may be authorized by permit. ***"Prohibited materials"*** means substances including, but not limited to; natural or synthetic rubber products, including tires; waste petroleum products, such as oil or used oil filters; insulated wire; plastic products, including polyvinyl chloride ("PVC") pipe, tubing and connectors; tar, asphalt, asphalt shingles, or tar paper; railroad ties; wood, wood waste, or lumber that is painted or chemically treated; explosives or ammunition; batteries; hazardous waste products; asbestos or asbestos containing materials; or materials which cause dense smoke discharges, excluding refuse and flaring associated with oil and gas well testing, completions and well workovers.

(b) No person or organization shall conduct or cause or permit open burning for the disposal of trade wastes, for a salvage operation, for the destruction of fire hazards if so designated by a jurisdictional fire authority, or for fire fighting training, except when it can be shown by a person or organization that such open burning is absolutely necessary and in the public interest. Any person or organization intending to engage in such open burning shall file a request to do so with the Division.

Sulfur Dioxide Emission Trading and Inventory Program [WAQSR Ch 14]

(G24) Any BART (Best Available Retrofit Technology) eligible facility, or facility which has actual emissions of SO_2 greater than 100 tpy in calendar year 2000 or any subsequent year, shall comply with the applicable requirements of WAQSR Ch 14, Sections 1 through 3, with the exceptions described in sections 2(c) and 3(a).

Stratospheric Ozone Protection Requirements: [40 CFR Part 82]

(G25) The permittee shall comply with all applicable Stratospheric Ozone Protection Requirements, including but not limited to:

(a) *Standards for Appliances* [40 CFR Part 82, Subpart F]
The permittee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F - Recycling and Emissions Reduction, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

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

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

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

(iv) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" is defined at §82.152).

(v) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.166.

(vi) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

(vii) The permittee shall comply with all other requirements of Subpart F.

(b) *Standards for Motor Vehicle Air Conditioners* [40 CFR Part 82, Subpart B]
If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.

STATE ONLY PERMIT CONDITIONS

(Modified October 21, 2014)

The conditions listed in this section are State only requirements and are not federally enforceable.

Ambient Standards

(S1) The permittee shall operate the emission units described in this permit such that the following ambient standards are not exceeded:

POLLUTANT	STANDARD*	CONDITION	WAOSR CH. 2, SEC.
PM_{10} particulate matter	50 micrograms per cubic meter	annual arithmetic mean	2 (a)
	150 micrograms per cubic meter	24-hr average concentration with not more than one exceedance per year	
$PM_{2.5}$ particulate matter	15 micrograms per cubic meter	annual arithmetic mean	2 (b)
	35 micrograms per cubic meter	98th percentile 24-hour average concentration	
Nitrogen dioxide	**53 parts per billion**	**annual average concentration**	3
	100 parts per billion	**three-year average of the annual 98th percentile of the daily maximum 1-hr average concentration**	
	0.053 parts per million	**annual arithmetic mean**	
Sulfur **dioxide**	**75 parts per billion**	**three-year average of the annual (99th percentile) of the daily max 1-hr average**	4
	0.5 parts per million	**3-hr blocks not to be exceeded more than once per calendar year**	
Carbon monoxide	10 milligrams per cubic meter	max 8-hr concentration with not more than one exceedance per year	5
	40 milligrams per cubic meter	max 1-hr concentration with not more than one exceedance per year	
Ozone	**0.075** parts per million	**three-year average of the annual fourth-highest daily maximum 8-hr average concentration**	6
Hydrogen sulfide	70 micrograms per cubic meter	½ hour average not to be exceeded more than two times per year	7
	40 micrograms per cubic meter	½ hour average not to be exceeded more than two times in any five consecutive days	
Suspended sulfate	0.25 milligrams SO_3 per 100 square centimeters per day	maximum annual average	8
	0.50 milligrams SO_3 per 100 square centimeters per day	maximum 30-day value	
Lead and its compounds	0.15 micrograms per cubic meter	maximum arithmetic 3-month mean concentration for a 3-year period	10

***Exceedances of these standards shall be determined using the procedures in 40 CFR 50.**

Hydrogen Sulfide: [WAQSR Ch 3, Sec 7]

(S2) Any exit process gas stream containing hydrogen sulfide which is discharged to the atmosphere from any source shall be vented, incinerated, flared or otherwise disposed of in such a manner that ambient sulfur dioxide and hydrogen sulfide standards are not exceeded.

Odors: [WAQSR Ch 2, Sec 11]

(S3) (a) The ambient air standard for odors from any source shall be limited to an odor emission at the property line which is undetectable at seven dilutions with odor free air as determined by a scentometer as manufactured by the Barnebey-Cheney Company or any other instrument, device, or technique designated by the Division as producing equivalent results. The occurrence of odors shall be measured so that at least two measurements can be made within a period of one hour, these determinations being separated by at least 15 minutes.

(b) Odor producing materials shall be stored, transported, and handled in a manner that odors produced from such materials are confined and that accumulation of such materials resulting from spillage or other escape is prevented.

SUMMARY OF SOURCE EMISSION LIMITS AND REQUIREMENTS

Source ID#: **K1-710** Source Description: **Kiln #1 (Modified October 21, 2014)**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	Offset emissions [F2] 20 percent opacity [F4] 0.30 lb/ton of feed 13.59 lb/hr, 59.5 TPY [F6]	WAQSR Ch 6, Sec 2 Permits CT-1137, MD-245, MD-9022	Test once every 5 years [F9] Testing if required [F11]	Compliance assurance monitoring (CAM), continuous opacity monitoring (COM), test per F9 [F13]	Record CAM, COM, test results, and corrective action [F20, F21, F23] Daily production and kiln feed rates [F22]	Test reports [F26] CAM reports [F27] COM reports [F28] Report excess emissions and permit deviations [F35]
SO_2	406.0 lb/hr (3-hour rolling average). 100.0 lb/hr (30-day rolling hourly average) 438.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permits CT-1137 and MD-245, and 3/23/00 Division letter	Testing if required [F11]	Continuous emissions monitoring (CEM) [F13]	CEM records [F23]	CEM reports [F29] Report excess emissions and permit deviations [F35]
NO_X	208.80 lb/hr (30-day rolling hourly average) 914.5 TPY [F6]	WAQSR Ch 6, Sec 2 Permits CT-1137 and MD-245	Testing if required [F11]	Continuous emissions monitoring (CEM) [F13]	CEM records [F23]	CEM reports [F29] Report excess emissions and permit deviations [F35]
Particulate, NO_X, SO_2	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
CO	116.0 lb/hr 508.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permit MD-245	Test every 12 months [F9] Testing if required [F11]	Test per F9 [F13]	Record test results [F20]	Monitoring reports [F27] Report excess emissions and permit deviations [F35]
VOCs	7.30 lb/hr 32.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permits MD-245	Test every 12 months [F9] Testing if required [F11]	Test per F9 [F13]	Record test results [F20]	Monitoring reports [F27] Report excess emissions and permit deviations [F35]
HAPs	SAC and raw material limits, and fuel use [F7]	WAQSR Ch 6, Sec 2 Permits/Waivers/letters AP-D66, AP-0819, **AP-13877**, MD-983, MD-6642A, 10/16/98	TCLP analysis [F10] Testing if required [F11]	Fuel/feed and annual emissions monitoring [F13]	Record monitoring, TCLP results, and COM results [F20, F23] Record dates and amounts of feed/fuel **and "Beneficial Use Determination"** [F22]	TCLP analysis results [F26] Feed/fuel report [F33] Report excess emissions and permit deviations [F35]
	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					
Various – biofuel project	Project emission limits [F36]	WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739	Testing if required [F11]	Project monitoring [F37]	Project recordkeeping [F38 and F40]	Report excess emissions and permit deviations [F35] Project reports [F39]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **K-401** Source Description: **Kiln #2**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	20 percent opacity [F4] 0.30 lb/ton of feed 29.30 lb/hr 128.3 TPY [F6]	WAQSR Ch 6, Sec 2 Division letter 7/31/06	Test once every 12 months. Test upon change in feed or fuel [F9] Testing if required [F11]	Compliance assurance monitoring (CAM), continuous opacity monitoring (COM), test per F9 [F13]	Record CAM, COM, test results, and corrective action [F20, F21, F23] Daily production and kiln feed rates [F22]	Test reports [F26] CAM reports [F27] COM reports [F28] Report excess emissions and permit deviations [F35]
SO_2	537.5 lb/hr (3-hour rolling average) 100.0 lb/hr (30-day rolling hourly average) 438.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permits CT-1137 and MD-245, and 3/23/00 Division letter	Testing if required [F11]	Continuous emissions monitoring (CEM) [F13]	CEM records [F23]	CEM reports [F29] Report excess emissions and permit deviations [F35]
NO_X	450.00 lb/hr (30-day rolling hourly average) 1971.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permits CT-1137 and MD-245	Testing if required [F11]	Continuous emissions monitoring (CEM) [F13]	CEM records [F23]	CEM reports [F29] Report excess emissions and permit deviations [F35]
Particulate, NO_X, SO_2	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
CO	250.0 lb/hr 1095.0 TPY [F6]	WAQSR Ch 6, Sec 2 Permit MD-245	Test every 12 months [F9] Testing if required [F11]	Test per F9 [F13]	Record test results [F20]	Monitoring reports [F27] Report excess emissions and permit deviations [F35]
VOCs	15.47 lb/hr 67.8 TPY [F6]	WAQSR Ch 6, Sec 2 Permits MD-245	Test every 12 months [F9] Testing if required [F11]	Test per F9 [F13]	Record test results [F20]	Monitoring reports [F27] Report excess emissions and permit deviations [F35]
HAPs	SAC and raw material limits, and fuel use [F7]	WAQSR Ch 6, Sec 2 Waivers/Permits AP-D66, AP-0819, **AP-13877**, and MD-6642A	TCLP analysis [F10] Testing if required [F11]	Fuel/feed and annual emissions monitoring [F13]	Record monitoring, TCLP results, and COM results [F20, F23] Record dates and amounts of feed/fuel **and "Beneficial Use Determination"** [F22]	TCLP analysis results [F26] Feed/fuel report [F33] Report excess emissions and permit deviations [F35]
	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					
Various – biofuel project	Project emission limits [F36]	WAQSR Ch 6, Sec 2 Permits MD-6642A and MD-11739	Testing if required [F11]	Project monitoring [F37]	Project recordkeeping [F38 and F40]	Report excess emissions and permit deviations [F35] Project reports [F39]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **K1-880A/B** Source Description: **Clinker Cooler #1**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	10 percent opacity [F4] 0.10 lb/ton of kiln feed 4.53 lb/hr 19.8 TPY [F5]	WAQSR Ch 6, Sec 2 Permit CT-1137	Test once every 5 years [F9] Testing if required [F11]	Test per F9. Monitor opacity continuously. [F14]	Test and COM records [F20, F23] Daily clinker production [F22]	Test reports [F26] COM reports [F28] Clinker production report [F33] Report excess emissions and permit deviations [F35]
Particulate, NO_X, SO_2	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					

Source ID#: **K-515/K-541-1** Source Description: **Clinker Cooler #2**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	10 percent opacity [F4] 0.10 lb/ton of kiln feed 9.80 lb/hr 42.9 TPY [F5]	WAQSR Ch 6, Sec 2 Permit CT-1137	Test once every 5 years [F9] Testing if required [F11]	Test per F9. Monitor opacity continuously. [F14]	Test and COM records [F20] Daily clinker production [F22]	Test reports [F26] COM reports [F28] Clinker production report [F33] Report excess emissions and permit deviations [F35]
Particulate, NO_X, SO_2	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **F-531** Source Description: **Finish Mill A**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	10 percent opacity [F4] lb/hr and TPY limits [F5]	WAQSR Ch 6, Sec 2 Permit CT-1137	Testing if required [F11]	Compliance Assurance Monitoring (CAM), [F16]	Record CAM results and corrective action [F20 and F21]	CAM reports [F27] Report excess emissions and permit deviations [F35]
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					

Source ID#: **F-544, F-550, F-540, and F-776** Source Description: **Finish Mills B, B Discharge, B Feed, and C**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	10 percent opacity [F4] lb/hr and TPY limits [F5]	WAQSR Ch 6, Sec 2 Permit MD-11739; Ch 5, Sec 3 and 40 CFR 63 Subpart LLL	Test every 5 years [F9]	Test per F9. Compliance assurance monitoring (CAM). [F16]	Record CAM results and corrective action [F20 and F21]	CAM reports [F27] Report excess emissions and permit deviations [F35]
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					
Various – mill project	Project emission limits [F36]	WAQSR Ch 6, Sec 2 Permit MD-11739	Testing if required [F11]	Project monitoring [F37]	Project recordkeeping [F38 and F40]	Report excess emissions and permit deviations [F35] Project reports [F39]

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **B-694, B-808, B-816-A, B-816-B, B-823, B-860, B-865, B-870, B-875, B-912, B-954, F-405, F-406, F-580, K1-106, K-207-1, K-207-2, K-410, K1-783, R-111A, R-230** Source Description: **Material Handling Dust Collectors**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	10 percent opacity [F4] lb/hr and TPY limits [F5]	WAQSR Ch 6, Sec 2 Permits/Waivers CT-1137, AP-5557, AP-S10, AP-437	Testing if required [F11]	Test per F9. Compliance assurance monitoring (CAM). [F16]	Record CAM results and corrective action [F20 and F21]	CAM reports [F27] Report excess emissions and permit deviations [F35]
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & F					
HAPs	WAQSR Ch 5, Sec 3 and 40 CFR 63 Subparts A & LLL					

Source ID#: **K-521 and K-551** Source Description: **Kiln #2 Coal Bin and Coal Transfer Belt**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & Y					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

Source ID#: **K-553** Source Description: **Coal Tunnel**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	Less than 20 percent opacity [F4] 0.43 lb/hr 1.9 TPY [F5]	WAQSR Ch 6, Sec 2 Permit CT-1137	Testing if required, and per §60.255 [F11]	Compliance Assurance Monitoring (CAM) [F16]	Record CAM results and corrective action [F20 and F21]	CAM reports [F27] Report excess emissions and permit deviations [F35]
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & Y					

Source ID#: **R-016 and R-023** Source Description: **Primary Crusher Dust Collectors**

Pollutant	Emissions Limit/Work Practice Standard	Corresponding Regulation(s)	Testing Requirements	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Particulate	7 percent opacity [F4] 0.01 gr/dscf lb/hr limits [F5]	WAQSR Ch 6, Sec 2 Permit MD-996	Testing if required and per §60.675 [F11]	Compliance Assurance Monitoring (CAM) [F16]	Record CAM results and corrective action [F20 and F21]	Report CAM results semiannually [F27] Report excess emissions and permit deviations [F35]
Particulate	WAQSR Ch 5, Sec 2 and 40 CFR 60 Subparts A & OOO					

These tables are intended only to highlight and summarize applicable requirements for each source. The corresponding permit conditions, listed in brackets, contain detailed descriptions of the compliance requirements. Compliance with the summary conditions in these tables may not be sufficient to meet permit requirements. These tables may not reflect all emission sources at this facility.

ABBREVIATIONS
(Modified October 21, 2014)

ACFM	Actual cubic feet per minute
AFRC	Air-fuel ratio controls
AQD	Air Quality Division
BACT	Best available control technology (see Definitions)
Btu	British Thermal Unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous Opacity Monitor
DEQ	Wyoming Department of Environmental Quality
EPA	United States Environmental Protection Agency (see Definitions)
ESP	Electrostatic Precipitator
g/hp-hr	Gram(s) per horsepower hour
gal	Gallon(s)
gr	Grain(s)
H_2S	Hydrogen sulfide
HAP(s)	Hazardous air pollutant(s)
hp	Horsepower
hr	Hour(s)
lb	Pound(s)
M	Thousand
MACT	Maximum available control technology (see Definitions)
mfr	Manufacturer
mg	Milligram(s)
MM	Million
MVACs	Motor vehicle air conditioners
NMHC(s)	Non-methane hydrocarbon(s)
NO_X	Oxides of nitrogen
NSCR	Non-selective catalytic reduction
O_2	Oxygen
PM	Particulate matter
PM_{10}	Particulate matter less than or equal to a nominal diameter of 10 micrometers
ppmv	Parts per million (by volume)
ppmw	Parts per million (by weight)
QIP	Quality Improvement Plan
SAC	Spent alumina catalyst
SCF	Standard cubic foot (feet)
SCFD	Standard cubic foot (feet) per day
SCM	Standard cubic meter(s)
SIC	Standard Industrial Classification
SO_2	Sulfur dioxide
SO_X	Oxides of sulfur
TPD	Ton(s) per day **(1 ton = 2000 pounds, unless otherwise specified)**
TPH	Ton(s) per hour **(1 ton = 2000 pounds, unless otherwise specified)**
TPY	Tons per year **(1 ton = 2000 pounds, unless otherwise specified)**
U.S.C.	United States Code
µg	Microgram(s)
VOC(s)	Volatile organic compound(s)
W.S.	Wyoming Statute
WAQSR	Wyoming Air Quality Standards & Regulations (see Definitions)

DEFINITIONS

"Act" means the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.*

"Administrator" means Administrator of the Air Quality Division, Wyoming Department of Environmental Quality.

"Applicable requirement" means all of the following as they apply to emissions units at a source subject to Chapter 6, Section 3 of the WAQSR (including requirements with future effective compliance dates that have been promulgated or approved by the EPA or the State through rulemaking at the time of issuance of the operating permit):

(a) Any standard or other requirement provided for in the Wyoming implementation plan approved or promulgated by EPA under title I of the Act that implements the relevant requirements of the Act, including any revisions to the plan promulgated in 40 CFR Part 52;

(b) Any standards or requirements in the WAQSR which are not a part of the approved Wyoming implementation plan and are not federally enforceable;

(c) Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D of the Act and including Chapter 5, Section 2 and Chapter 6, Sections 2 and 4 of the WAQSR;

(d) Any standard or other requirement promulgated under Section 111 of the Act, including Section 111(d) and Chapter 5, Section 2 of the WAQSR;

(e) Any standard or other requirement under Section 112 of the Act, including any requirement concerning accident prevention under Section 112(r)(7) of the Act and including any regulations promulgated by EPA and the State pursuant to Section 112 of the Act;

(f) Any standard or other requirement of the acid rain program under title IV of the Act or the regulations promulgated thereunder;

(g) Any requirements established pursuant to Section 504(b) or Section 114(a)(3) of the Act concerning enhanced monitoring and compliance certifications;

(h) Any standard or other requirement governing solid waste incineration, under Section 129 of the Act;

(i) Any standard or other requirement for consumer and commercial products, under Section 183(e) of the Act (having to do with the release of volatile organic compounds under ozone control requirements);

(j) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under title VI of the Act, unless the EPA has determined that such requirements need not be contained in a title V permit;

(k) Any national ambient air quality standard or increment or visibility requirement under part C of title I of the Act, but only as it would apply to temporary sources permitted pursuant to Section 504(e) of the Act; and

(l) Any state ambient air quality standard or increment or visibility requirement of the WAQSR.

(m) Nothing under paragraphs (A) through (L) above shall be construed as affecting the allowance program and Phase II compliance schedule under the acid rain provision of Title IV of the Act.

"BACT" or "Best available control technology" means an emission limitation (including a visible emission standard) based on the maximum degree of reduction of each pollutant subject to regulation under the WAQSR or regulation under the Federal Clean Air Act, which would be emitted from or which results for any proposed major emitting facility or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application or production processes and available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, he may instead prescribe a design, equipment, work practice or operational standard or combination thereof to satisfy the requirement of Best Available Control Technology. Such standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results. Application of BACT shall not

result in emissions in excess of those allowed under Chapter 5, Section 2 of the WAQSR and any other new source performance standard or national emission standards for hazardous air pollutants promulgated by EPA but not yet adopted by the state.

"Department" means the Wyoming Department of Environmental Quality or its Director.

"Director" means the Director of the Wyoming Department of Environmental Quality.

"Division" means the Air Quality Division of the Wyoming Department of Environmental Quality or its Administrator.

"Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

"EPA" means the Administrator of the U.S. Environmental Protection Agency or the Administrator's designee.

"Fuel-burning equipment" means any furnace, boiler apparatus, stack, or appurtenances thereto used in the process of burning fuel or other combustible material for the purpose of producing heat or power by indirect heat transfer.

"Fugitive emissions" means those emissions which could not reasonably pass through a stack chimney, vent, or other functionally equivalent opening.

"Insignificant activities" means those activities which are incidental to the facility's primary business activity and which result in emissions of less than one ton per year of a regulated pollutant not included in the Section 112 (b) list of hazardous air pollutants or emissions less than 1000 pounds per year of a pollutant regulated pursuant to listing under Section 112 (b) of the Act provided, however, such emission levels of hazardous air pollutants do not exceed exemptions based on insignificant emission levels established by EPA through rulemaking for modification under Section 112 (g) of the Act.

"MACT" or "Maximum achievable control technology" means the maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory that shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than:

(a) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emission information), excluding those sources that have, within 18 months beforethe emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, orwould comply if the source is not subject to such standard, with the lowest achievable emission rate applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(b) the average emission limitation achieved by the best performing five sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

"Modification" means any physical change in, or change in the method of operation of, an affected facility which increases the amount of any air pollutant (to which any state standards applies) emitted by such facility or which results in the emission of any such air pollutant not previously emitted.

"Permittee" means the person or entity to whom a Chapter 6, Section 3 permit is issued.

"Potential to emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in title IV of the Act or the regulations promulgated thereunder.

"Regulated air pollutant" means the following:

(a) Nitrogen oxides (NO_X) or any volatile organic compound;

(b) Any pollutant for which a national ambient air quality standard has been promulgated;

(c) Any pollutant that is subject to any standard established in Chapter 5, Section 2 of the WAQSR or Section 111 of the Act;

(d) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act; or

(e) Any pollutant subject to a standard promulgated under Section 112 or other requirements established under Section 112 of the Act, including Sections 112(g), (j), and (r) of the Act, including the following:

(i) Any pollutant subject to requirements under Section 112(j) of the Act. If EPA fails to promulgate a standard by the date established pursuant to Section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to Section 112(e) of the Act; and

(ii) Any pollutant for which the requirements of Section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to Section 112(g)(2) requirement.

(f) Pollutants regulated solely under Section 112(r) of the Act are to be regulated only with respect to the requirements of Section 112(r) for permits issued under this Chapter 6, Section 3 of the WAQSR.

"Renewal" means the process by which a permit is reissued at the end of its term.

"Responsible official" means one of the following:

(a) For a corporation:

(i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) A duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(A) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(B) the delegation of authority to such representative is approved in advance by the Division;

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(c) For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

(d) For affected sources:

(i) The designated representative or alternate designated representative in so far as actions, standards, requirements, or prohibitions under title IV of the Act or the regulations promulgated thereunder are concerned; and

(ii) The designated representative, alternate designated representative, or responsible official under Chapter 6, Section 3 (b)(xxvi) of the WAQSR for all other purposes under this section.

"WAQSR" means the Wyoming Air Quality Standards and Regulations promulgated under the Wyoming Environmental Quality Act, W.S. §35-11-101, *et seq.*

Appendix A

Operational Plan for Handling and Storage of Cement Clinker Outside

ATTACHMENT NO.5

MOUNTAIN CEMENT COMPANY – Laramie, Wyoming

Operational Plan for Handling and Storing Cement Clinker Outside
Revision 1

Purpose: This operational plan is to be reviewed and used as a guideline to be followed in the handling and storage of clinker outside of the clinker storage building. By following this plan the amount of fugitive emissions potentially created from these operations can be significantly reduced.

PLANNING
In order to plan for building an outside clinker pile, we must first determine the following parameters in order to minimize potential fugitive emissions:

1) Determine the amount of clinker that is to be stored outside;
2) Make certain that the completed pile is properly controlled by shotcrete applications, or a suitable alternative;
3) Determine the amount of time needed to build the pile;
4) Consider weather conditions for the time that the operations will take place;
5) Make certain that all personnel involved in the operations are cognizant of this plan and sign it; if needed, have the Environmental Manager go over the plan.

WEATHER
Wind is probably the greatest factor to consider when transporting clinker outside. Not only planning considerations need to be followed, but also the need for all operators to realize when weather conditions change that might cause excess fugitive dust emissions. It is important that the operators communicate to their supervisors when they feel that changing weather conditions (e.g. increasing winds) warrant temporarily stopping the transferring of clinker outside.

Rain, in light intensities, would be very well suited for transferring clinker. However, heavy rains should be avoided, as this can cause the clinker to become hydrated. Initial planning for storing clinker outside should take rain events into consideration.

CLINKER HANDLING
When transporting clinker from the clinker storage shed to outside make sure to mainly pull clinker from the outside base of the pile. The outsides of the pile tend to have more coarse clinker material, and contain fewer fines than the inner parts of the pile.

Building clinker piles involves running front-end loaders up the face of the pile; thereby giving the pile some height.

SAFETY NOTE: Be sure to create a berm up the clinker pile that is at least one-half the height of the front-end loader's wheels (i.e. as high as the axles).

02-26-2013 052081

The bucket should only be raised high enough to drop the load on the clinker pile. Do not over extend the bucket height unnecessarily. By minimizing the drop height of the clinker, potential dust created by this operation will be minimized.

CONTROL MEASURES
Once the clinker pile was been created it is important to begin the application of control measures (e.g. shotcrete applications or a suitable alternative) as soon as possible.

If tarping is used a temporary control, it is important to cover exposed areas entirely and to seal edges as best as possible to limit air from entering below the tarps. In order to create a good seal use a small quantity of clinker around the entire perimeter of the tarped pile. Once the entire tarp is sealed have the water truck wet down the clinker. This wetting will hydrate the clinker, thereby binding any smaller particles with the coarse clinker.

RECLAIMING CLINKER
The same considerations used for building the clinker piles should also be used for the reclaiming of clinker from them. If at all possible, the entire clinker pile should be reclaimed at one time; thereby minimizing the need for temporarily tarping the pile as it is becoming smaller.

Once again, wind is the greatest of concerns when working with the outside clinker piles. In order to minimize dust generated from these operations, winds should be minimal (e.g. 10 mph, or less). Also the operators must be very aware of wind as it effects the operations.

DOCUMENTATION
The Environmental Department must be aware of any, and all operations involved in the storage of outside clinker. Prior to the physical operations, the Environmental Manager shall be notified so that he/she can be involved in the planning meetings for the operations. The Environmental Manager shall keep records of all outside clinker operations.

PERMITTING
Any stipulations contained in documentation from the Wyoming Department of Environmental Quality – Air Quality Division must be adhered to while dealing with outside storage and handling of clinker. The Environmental Manager will hold all permits, waivers, etc. and will convey any provisions contained in those documents to plant management and supervisors responsible to crews handling clinker outside.

07-26-2013 032981

Appendix B

Alternate Testing Approval

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

RECEIVED
OCT 2003
AIR QUALITY DIVISION

OCT 3 2003

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Mr. William A. Sansing, Environmental Manager
Mountain Cement Company
5 Sand Creek Road
Laramie, Wyoming 82070

Dear Mr. Sansing:

We are writing in response to your request dated September 8, 2003 for an alternative testing approach to be used at the Mountain Cement Company facility located in Laramie, Wyoming. As we understand it, Mountain Cement is subject to the requirements of 40 CFR 60, Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. As such, Mountain Cement is required to conduct performance testing under §63.1349(b)(2) using Method 9 (40 CFR Part 60, Appendix A) to determine compliance with opacity limits set forth in §63.1348.

In your request, you explain that Mountain Cement has a number of emission sources that are enclosed within buildings and propose in lieu of conducting Method 9 testing of individuals affected sources inside the buildings to conduct Method 22 (40 CFR Part 60, Appendix A) observations for visible emissions on the sides and roof of the buildings as well as Method opacity observations of the building vents.

Although Subpart LLL of Part 63 does not specifically address alternative test methods for materials handling equipment located inside buildings, we are willing to defer to the approach under the Standards for Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60, Subpart OOO, §60.672 (e)) which is identical to what you have proposed, and which states: "the building enclosing the affected facility or facilities must comply with the following emission limits: (1) No owner or operator shall cause to discharge into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in §60.671. (2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility any emissions which exceed the stack emissions limits..."

In specific, to apply this approach, Mountain Cement in Laramie, Wyoming must meet the following two requirements:

(1) For each building enclosing materials handling and conveying system equipment affected sources, conduct observations for visible emissions other than condensed water vapor

using Method 22. The observations must be conducted while all affected materials processing operations within the building are operating and must be at least 75 minutes in duration for each building, with each side of the building and roof being observed for at least 15 minutes each. The observation position should be at least 15, but not more 1,320 feet from each side of the building with the sun or other light source generally at the observer's back.

(2) For each emission point (defined as a vent under §60.671) from a building enclosing materials handling and conveying system equipment affected sources, conduct opacity observations using Method 9. Each vent must be observed for at least 3 hours to obtain at least thirty, 6-minute averages. The duration of the Method 9 performance test may be reduced to 1-hour if (a) there are no individual readings greater than 10 percent opacity and (b) there are no more than three readings of 10 percent for the first 1-hour period.

The results of the (1) Method 22 observations of any building must show no visible emissions and (2) Method 9 observations of any vents must meet the opacity limits set forth in §63.1348.

If you have any questions regarding this alternative, please contact Robin Segall of my staff at 919-541-0893 or segall.robin@epa.gov.

Sincerely,

Conniesue B. Oldham

Conniesue B. Oldham, Ph.D., Group Leader
Source Measurement Technology Group

cc: Keith Barnett, EPA/OAQPS/EMAD
Lori Bocchino, WDEQ-AQD
Albion Carlson, EPA Region 8
Greg Fried, OECA

Appendix C

Compliance Assurance Monitoring (CAM) Plan

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN
MOUNTAIN CEMENT COMPANY

PLAN A *(UNITS TYPICALLY OPERATE WITHOUT VISIBLE EMISSIONS)*

A. Emission Units & Emission Limits

No.	Source	ID Number	PM Emission Limit (lb/hr)	Opacity Limit (%)
1	Primary Crusher	R-016	0.7	7
2	Primary Crusher Hopper feeder	R-023	0.2	7
3	Raw Material Belt Discharge	R-111A	0.22	10
4	Raw Silo #3 Bin	R-230	0.22	10
5	No. 1 Blending Silo	K-207-1	0.86	10
6	No. 2 Blending Silo	K-207-2	0.86	10
7	Coal Tunnel	K-553	0.43	20
8	Kiln #1 Cement Kiln Dust Storage Silo	K-410	0.15	10
9	Kiln #1 Reclaim Elevator (inside)	K1-106	0.17	10
10	Clinker Conveyor from Kiln #1	K1-783	0.86	10
11	Clinker Reclaim Tunnel	F-405	0.62	10
12	Clinker Reclaim Transfer Tower	F-406	0.21	10
13	Finish Mill "A" System	F-531	4.37	10
14	Finish Mill "B" Feed	~~F-641~~ 540	~~0.91~~ 0.5	10
15	Finish Mill "B" Vent	~~F-631~~ 544	1.00	10
16	Finish Mill "B" Discharge	~~F-636~~ 550	~~1.00~~ 0.5	10
17	Finish Mill "C" System Vent	~~F-710~~ 776	~~1.89~~ 0.8	10
18	Bulk Cement Bucket Elevator and F-K Pump Transfer	B-808	0.43	10
19	East Cement Storage Silos Load-in	F-580	0.78	10
20	West Cement Storage Silos Load-in	B-694	1.46	10
21	East Packhouse; East Silos Load-out	B-875	1.13	10
22	West Packhouse; West Silos Load-out	B-870	1.13	10
23	No. 7 Cement Silo Load-in & Load-out	B-816-A	1.46	10
24	No. 8 Cement Silo Load-in	B-816-B	~~0.69~~ 0.43	10
25	No. 8 Cement Silo Load-out	B-823	0.09	10
26	No. 9/10 Cement Silo Load-in	B-912	0.20	10
27	No. 9/10 Cement Silo Load – out (inside)	B-954	0.10	10
28	Silo No. 11 Load-in	B-860	0.69	10
29	Truck Scale / Silo No. 11 Load-out	B-865	0.77	10

B. Control Technology

Air pollution control for the above sources comprise of fabric filter dust collectors.

05-27-2009 032028

C. **Monitoring Approach**

1. Indicator

Visible emissions will be used as an indicator.

2. Measurement

EPA Referenced Method 22 procedures will be used for the finish mill sources (Finish Mill A, B, and C), and EPA Reference Method 22-like procedures will be employed at the exhaust of the pollution control device for all other of the sources.

3. Frequency of Measurements

Official six-minute observations will be performed daily for the finish mill sources using procedures set forth in C. 2. All other sources will be observed using one-minute "see" or "no-see" results, which will be performed daily by either production or packing/shipping personnel.

Unofficial readings are also taken by maintenance personnel performing preventative maintenance activities on each of the plant's baghouses. These unofficial readings are done during weekly baghouse inspections. Maintenance personnel are not Method 22 trained, and may document visible emissions seen that are not necessarily seen when utilizing proper US EPA Method 22 procedures.

4. Indicator Range

No detectable emission opacity, with the observer positioned as if to make a USEPA Method 9 observation (e.g. positioned between sun position and source being observed)

5. Quality Improvement Plan (QIP) Threshold

The QIP threshold is six excursions within a six month reporting period.

6. Performance Criteria

Measurements are to be made at the emission point, using USEPA Method 9 observation criteria for positioning observer.

7. Verification of Operational Status

Records will indicate if equipment was operational during the monitoring period. Daily production and throughput rates are kept on file.

8. QA / QC Practices and Criteria

Observers will be Method 22 trained and will adhere to Method 22 procedures for Finish Mill sources (Finish Mill A, B, and C); and will adhere to Method 22-like procedures for all other sources.

05-27-2009 032028

D. Justification

1. Background

This facility manufactures Portland cement. Raw material, which provides the necessary composition of silica, calcium, iron, alumina, etc., is ground to a fine texture and is heated in one of two kilns. The heated material, referred to as clinker, is ground to a finer size along with other additives such as gypsum, resulting in Portland cement. The product is loaded into trucks or rail cars or is sent elsewhere for bagging. Dust collection control is employed throughout the process.

2. Rationale for Selection of Performance Indicator

Visible emissions observations are deemed a good performance indicator since the findings are quickly obtained and are indicative of the dust collectors' efficiency. Visible emissions will not be observed exiting a properly operating particulate matter control device. Conversely, such emissions will become visible if a dust collector is not functioning satisfactorily.

3. Rationale for Selection of Indicator Level

The selected indicator range is no visible emissions. Using an EPA Reference Method 22 protocol, a "see" or "no-see" method, lasting six minutes for the Finish Mill Sources (Finish Mill A, B, and C), and, an USEPA reference Method 22-like protocol, lasting at least one minute for all other sources, for evaluating dust collectors' efficiency was selected at this facility because: (1) it is an approved method, (2) it is quickly performed, (3) it can be used to evaluate the many dust collectors functioning throughout the facility, (4) it does not require a Method 9 certified observer, (5) it can be used while the process is operating, and (6) it has the advantage of detecting a problem at a distance instead of relying on close examination of gauges or similar metering devices. The scheduled daily inspection of each point source will be over a one-minute period. This time interval will be sufficient to provide reasonable assurance that the pollution control device is operating satisfactorily. Secondary observations and reporting of visible emissions by workers throughout the remainder of the day will provide additional assurance of compliance.

Findings of the above observations will be recorded and kept on file. When an excursion is detected, initiation of corrective actions will be initiated within one hour with the preparation of a work order that notifies maintenance personnel of the problem. Once the cause of the excursion is determined, personnel and equipment will be assigned to correct the problem.

The selected Quality Improvement Plan (QIP) threshold for visible emissions from the above dust collectors is six excursions within a 6-month reporting period. This threshold level represents approximately 3 percent of the total visible emissions observations. If the threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

05-27-2009 032028

PLAN B *(UNITS EQUIPPED WITH CONTINUOUS OPACITY MONITORS)*

A. Emission Units & Emission Limits

No.	Source	ID Number	PM Emission Limit	Opacity (%)
1	Kiln #1 Baghouse	K1-710	13.59 lb/hr, 59.5 tpy *and* 0.30 lb/ton of feed (dry basis)	20
2	Kiln #2 Baghouse	K-401	29.30 lb/hr 128.3 tpy *and* 0.30 lb/ton of feed (dry basis)	20

B. Control Technology

Fabric filter dust control is used throughout the facility.

C. Monitoring Approach

1. Measurement

Opacity will be measured with continuous opacity monitors (COMs).

2. Frequency of Measurements

Opacity at the exhaust stacks of the above equipment is continuously monitored with continuous opacity monitors (COMs). Six-minute averages of the readings are recorded and kept on file.

3. Indicator Range

The permitted opacity limit for the different equipment will be used as an indicator. The federally enforced limit is 20% for kilns.

4. Performance Criteria

Measurements will be taken inside exhaust stacks for the above equipment within EPA required monitor location specifications.

05-27-2009 032028

5. Verification of Operational Status

Records will be kept on file of equipment operating hours and production/throughput rates. Also, records of excursions will be maintained along with explanations of the cause of the excursion and corrective action(s) taken.

6. QA / QC Practices and Criteria

Daily calibrations are performed on the continuous opacity monitors and records of the calibration results are kept on file.

D. Justification

1. Background

Kilns are integral in the cement manufacturing process. During the pyroprocess, raw material is heated to extreme temperatures and converted into clinker. The heating process involves many chemical reactions that are controlled by closely monitoring and adjusting the chemistry of the raw material and parameters of the heating process.

Clinker formed in the kilns is then transferred to clinker coolers where it is rapidly cooled. The cooling "locks in" the chemical structures and allows the product to be handled. Subsequently, the clinker is ground with additives in finish mills. The final product of the grinding process is Portland cement.

At Mountain Cement Company, there are two kilns; both of which are equipped with a clinker cooler. The exhaust gases from the kilns traverse air pollution control devices designed to remove dust from the gases. The control device for both Kiln No. 1 and Kiln No.2 are fabric filter dust collectors. Dust removed from the gases from both kilns is either returned to the process or wasted. The cleaned gases are emitted into the atmosphere through exhaust stacks. Both kilns are equipped with their own stack. Continuous emissions monitors situated on each stack analyze the gases for certain pollutants and the opacity of the emissions. The latter serves as a surrogate measurement for the amount of particulate matter contained in the gases.

Ambient air is forced through a bed of clinker as it travels through the clinker coolers. This serves a dual purpose: The clinker is cooled and the gas is heated and serves as a secondary source of heat for the kiln. The clinker is then transferred to a storage area until it is ground with additives such as gypsum in the preparation of Portland cement. Gases from the clinker coolers are passed through baghouses where the dust is separated from the gases. The dust is returned to the process and the gases are released into the atmosphere through an exhaust stack. A continuous opacity monitor located on the stack monitors the opacity of the emissions. The opacity monitoring is a surrogate measurement for the amount of particulate matter contained in the gases.

05-27-2009 032028

2. Rationale for Selection of Performance Indicator

Opacity of emissions was selected as a performance indicator because it is indicative of the pollution control devices' efficiency. At Mountain Cement Company, certified monitors continuously measure the opacity of the emissions from the above sources and the results are recorded and maintained. When the pollution control devices are operating optimally, the percent opacity of the cleaned gases will be low. As the pollution control devices lose efficiency, the percent opacity of the gases will increase. Historically, opacity measurements have been determined at this facility to be the most reliable and sensitive method of determining the efficiency of the air pollution control devices. Furthermore, opacity measurements have been a widely approved method of surrogate monitoring for the amount of particulate matter contained in gases.

3. Rationale for Selection of Indicator Level

The indicator level for opacity of emissions is a 6-minute average of 20 percent for the kilns. This indicator level was selected for two reasons: (1) It is the opacity limit cited in our current permit and federal standards, 40 CFR 63, and (2) it correlates with the particulate matter (PM) emission rate limit. This correlation can be seen in Figures 1A and 1B which illustrates the results of several stack tests. As indicated in Figure A, 20 percent opacity of emissions from Kiln #1 stack correlates with a PM rate that is within the permitted limit. The same conclusion can be made for Kiln #2 as shown in Figure B. Consequently, based on these test results, the above opacity levels satisfy the permit limits for the equipment.

05-27-2009 032028

FIGURE 1: OPACITY *vs*. MASS EMISSIONS (LB/HOUR)

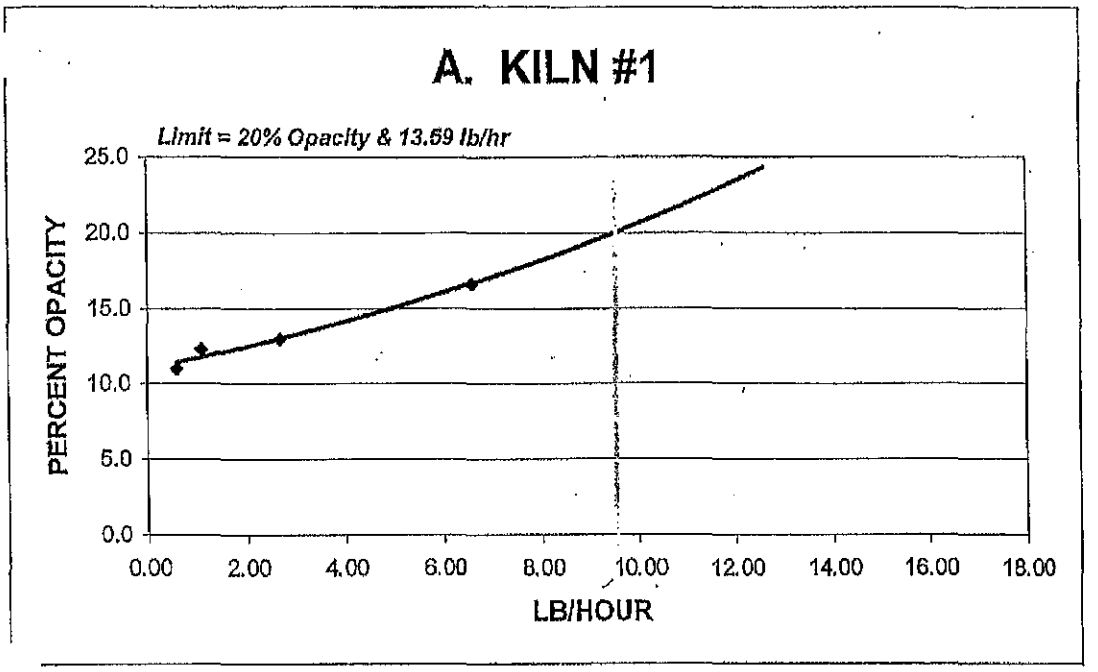
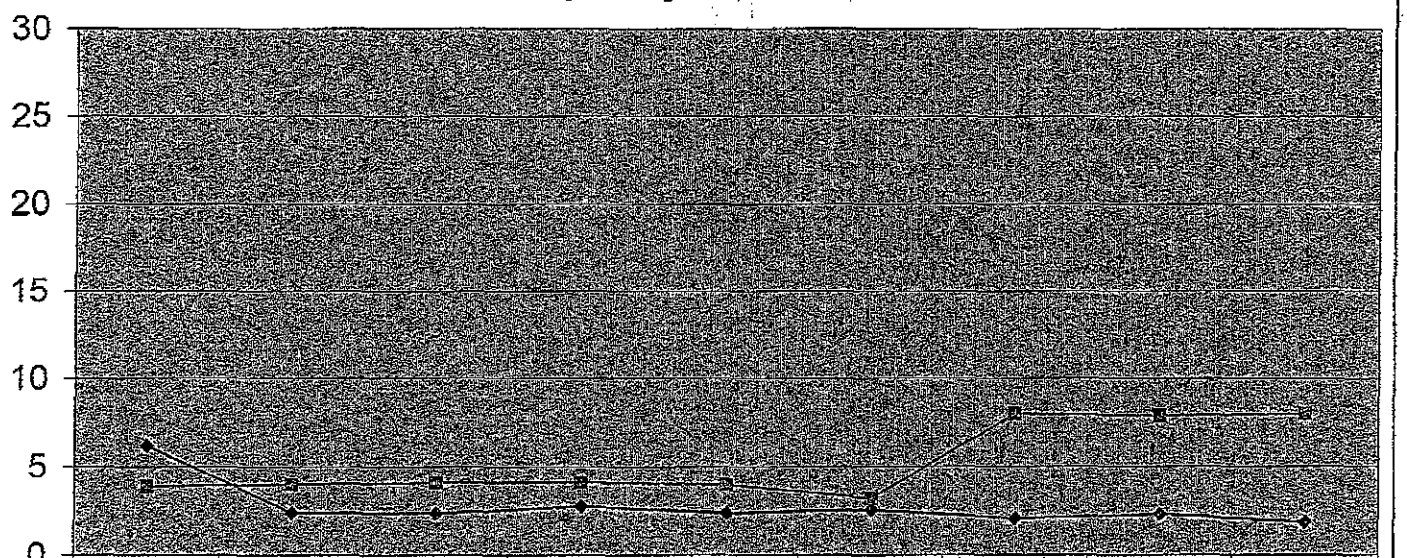


FIGURE 1: OPACITY vs. MASS EMISSIONS (LB/HOUR)
B. KILN #2
limit = 20% Opacity & 29.3 lb/hr



	1	2	3	4	5	6	7	8	9
LB/HR	6.199	2.381	2.349	2.744	2.37	2.532	2.062	2.288	1.849
OPACITY	3.88	3.99	4.08	4.08	3.97	3.19	8.02	7.89	8.01

LB/HR OPACITY

Appendix D

Operation and Maintenance Plan

(Amended December 6, 2013)

OPERATION and MAINTENANCE PLAN

MOUNTAIN CEMENT COMPANY

LARAMIE, WYOMING

Prepared: April / May, 2002;
REVISED March 19, 2009;
REVISED May 19, 2009

05-27-2009 032028

TABLE OF CONTENTS

1.0		INTRODUCTION	1
	1.1	GENERAL PROCESS DESCRIPTION	1
	1.2	PURPOSE OF THE OPERATION AND MAINTENANCE (O & M) PLAN	2
	1.3	SOURCES REGULATED AND ADDRESSED IN THIS O & M PLAN	2
2.0		PLANT-WIDE PROTOCOL	3
	2.1	PLANT-WIDE OPERATION PROCEDURES DURING STARTUP AND SHUTDOWN	3
	2.2	PLANT-WIDE MAINTENANCE PROCEDURES	3
3.0		KILNS #1 AND #2 AND THEIR PMCD	4
	3.1	PROCESS DESCRIPTION	4
	3.2	OPERATION PROCEDURES FOR THE KILN AND IN-LINE KILN/RAW MILL	4
	3.3	OPERATION PROCEDURES FOR KILN #1 BAGHOUSE	5
	3.4	OPERATION PROCEDURES FOR KILN #2 ELECTROSTATIC PRECIPITATOR	5
	3.5	MAINTENANCE PROCEDURES FOR THE KILNS AND THEIR PMCD	5
	3.6	EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL	5
	3.7	MONITORING PROCEDURES FOR THE KILNS AND THEIR PMCD	6
4.0		CLINKER COOLERS AND THEIR PMCD	6
	4.1	PROCESS DESCRIPTION	6
	4.2	OPERATION PROCEDURES FOR THE CLINKER COOLERS	6
	4.3	OPERATION PROCEDURES FOR THE CLINKER COOLERS' PMCD	6
	4.4	MAINTENANCE PROCEDURES FOR THE CLINKER COOLERS AND THEIR PMCD	6
	4.5	EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL	6
	4.6	MONITORING PROCEDURES FOR THE CLINKER COOLERS' PMCD	7
5.0		FINISH MILLS AND THEIR PMCD	7
	5.1	PROCESS DESCRIPTION	7
	5.2	OPERATION PROCEDURES FOR THE FINISH MILLS	7
	5.3	OPERATION PROCEDURES FOR THE FINISH MILLS' PMCD	7
	5.4	MAINTENANCE PROCEDURES FOR THE FINISH MILLS AND THEIR PMCD	7
	5.5	EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL	7
	5.6	MONITORING PROCEDURES FOR THE FINISH MILLS' PMCD	8

05-27-2009 032028

6.0 MATERIAL HANDLING OPERATIONS (MHO) 9
6.1 PROCESS DESCRIPTION 9
6.2 OPERATION PROCEDURES FOR THE MHO 9
6.3 OPERATION PROCEDURES FOR THE MHO'S PMCD 9
6.4 MAINTENANCE PROCEDURES FOR THE MHO AND THEIR PMCD 9
6.5 EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL 9
6.6 MONITORING PROCEDURES FOR THE MHOS' PMCD 10

6.0 RECORDKEEPING 11

05-27-2009 032028

1.0 INTRODUCTION

1.1 GENERAL PROCESS DESCRIPTION

The Mountain Cement Company, located in Laramie, Wyoming, is a Portland Cement Manufacturing Plant. The facility is subject to the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63, Subpart LLL). The production and distribution of portland cement is basically a five-stage process: 1) raw material acquisition, 2) raw material preparation, 3) raw material pyroprocessing to form clinker, 4) clinker grinding to produce the final product; *cement*, and 5) cement storage and distribution.

Raw Material Acquisition
Raw materials such as limestone and sandstone are primarily quarried and crushed locally and are stored in the quarry from which they were obtained or on site until use.

Raw Material Preparation
When ready for use, the quarried raw materials are proportioned with other raw materials such as iron ore to achieve required chemical composition and are ground in a raw mill to a desired fineness. After leaving the raw mill, the material is blended in silos to yield a homogeneous mixture referred to as kiln feed.

Pyroprocessing
The raw materials are heated in one of two dry-process kilns; referred to internally as kiln #1 and kiln #2. Air pollution control for kiln#1 is a baghouse, as is control for kiln #2. Kiln #2 is an in-line process in which the hot kiln exhaust gas is used to dry the raw material in the raw mill. Each kiln exhausts through its own stack. The product derived from the kilns is referred to as clinker. Each kiln is equipped with a clinker cooler. The coolers are controlled with separate baghouses but exhaust through a common stack. Combustion fuels for both kilns include natural gas and a coal/pet coke mixture. Hazardous wastes are not used as fuel at this facility.

Finish Grinding
The clinker is stored on site until it is needed to manufacture cement. At that time, the clinker is mixed with additives such as gypsum and occasionally process dust and is ground to a very fine product in finish mills. The final product, which must meet rigid federal and state chemical and physical standards, is portland cement.

Cement Storage and Distribution
Cement is stored in silos or bins until it is sold. All cement is bulk loaded into railcars or trucks for distribution. No bagging of cement is done at the site.

Dust control is provided for the above equipment as well as for the conveying systems transporting the various materials throughout the plant.

According to NESHAP definitions, the Mountain Cement Company Plant is classified as a major source and will be regulated as such.

1.2 PURPOSE OF THE OPERATION AND MAINTENANCE (O & M) PLAN

This plan is prepared in accordance with the requirements of 40 CFR 63.1350 (a). Specifically, this plan addresses:

a. Procedures for proper operation and maintenance of the affected Mountain Cement Company sources and associated air pollution control devices in order to meet the emission limits and operating limits described in 40 CFR 63, Subpart LLL.

b. Corrective action procedures to be taken when required by 40 CFR 63.1350(e) of 40 CFR 63, Subpart LLL.

c. Procedures to be used during the required annual inspection of combustion system components at each kiln and each in-line kiln raw mill designed to promote fuel efficiency and decrease the formation of combustion-related pollutants.

d. Procedures to be used to periodically monitor affected sources subject to opacity standards under §63.1346 and §63.1348.

1.3 SOURCES REGULATED AND ADDRESSED IN THIS O & M PLAN

The following emission sources are currently covered in our Operating Permit:

SOURCE ID#		SOURCE DESCRIPTION	CHAPTER 6, Section 2 PERMITS
1	R-111A	Raw Material Belt Discharge	CT-1137
2	R-230	Raw Silo #3 Bin	CT-1137
3	K-207-1	No. 1 Blending Silo	CT-1137
4	K-207-2	No. 2 Blending Silo	CT-1137
5	K1-710	Kiln No. 1 Baghouse	CT-1137
6	K-401	Kiln No. 2 Baghouse	CT-1137
7	K-410	Cement Kiln Dust Storage Silo	AP-437
8	CKD	Cement Kiln Dust Spout	AP-437
9	K-551	Coal Belt Dust Collector	NONE
10	K-521	Kiln #2 Coal Bin Dust Collector	NONE
11	F-405	Clinker Storage Load-in	CT-1137
12	F-406	Clinker Reclaim Transfer Tower	AP-510
13	F-531	Finish Mill "A" System	CT-1137
14	F-641	Finish Mill "B" Feed	CT-1137
15	F-631	Finish Mill "B" Vent	CT-1137
16	F-636	Finish Mill "B" Discharge	CT-1137
17	F-710	Finish Mill "C"	CT-1137
18	B-808	Bulk Cement Bucket Elevator, F-K Pump	CT-1137
19	F-580	East Cement Storage Silos Load-in	CT-1137
20	B-694	West Cement Storage Silos Load-in	CT-1137
21	B-875	East Packhouse, East Silos Load-out	CT-1137
22	B-870	West Packhouse, West Silos Load-out	CT-1137
23	B-816-A	No. 7 Cement Silo Load-in and Load-out	CT-1137
24	B-816-B	No. 8 Cement Silo Load-in	CT-1137
25	B-823	No. 8 Cement Silo Load-out	CT-1137
26	B-912	No. 9/10 Cement Silo Load-in	AP-5557
27	B-954	No. 9/10 Cement Silo Load-out (inside)	AP-5557
28	B-860	No. 11 Cement Silo Load-in	CT-1137
29	B-865	Truck Scale/No. 11 Cement Silo Load-out	CT-1137
30	B-882	Railcar Unloading (inside)	MD-983
31	F-410	(5) Clinker Reclaim Baghouses (inside)	MD-983
32	K1-106	Kiln No. 1 Feed and Dust Tank	CT-1137
33	K1-783	Clinker Conveyor from Kiln No. 1	CT-1137
34	K1-880A/B	Clinker Cooler No. 1 (common stack)	CT-1137
35	K-224	Kiln No. 2 Feed Transfer	MD-983
36	K-274	Kiln No. 1 Feed Transfer	None
37	K-438	Kiln No. 2 Dust Return Weigh Scale	MD-983
38	K-515/541-1	Clinker Cooler No. 2 (common stack)	CT-1137

2.0 PLANT-WIDE PROTOCOL

2.1 PLANT-WIDE OPERATION PROCEDURES DURING STARTUP AND SHUTDOWN

a. Pollution control equipment shall, to the extent possible, be maintained and operated in a manner consistent with good air pollution control practices for minimizing air emissions.

b. Process equipment will be started only after the associated pollution control device(s) has been started and is operating efficiently.

c. Pollution control devices shall be in operation at all times while process equipment is operating.

d. Conversely, during controlled shutdown, the process equipment will be shut down prior to shutting down the associated pollution control device(s).

2.2 PLANT-WIDE MAINTENANCE PROCEDURES

a. Pollution control equipment shall, to the extent possible, be maintained and operated in a manner consistent with good air pollution control practices for minimizing air emissions.

b. The emission control equipment shall be maintained in accordance with the manufacturer's instructions or recommendations to achieve a maximum continuous control efficiency.

c. Periodic inspection and maintenance will be performed on all pollution control equipment throughout the plant.

   i. All pollution control equipment will be inspected at least twice per year. Maintenance will be performed during those times if warranted.

   ii. Results of all inspections and records of maintenance performed will be kept in the Maintenance Department either on computer or in file cabinets.

   iii. Unscheduled inspections and maintenance will be performed as soon as possible on pollution control devices as soon as possible after visible emissions are noted.

d. A supply of backup or replacement equipment parts will be kept on inventory when feasible in an effort to minimize equipment downtime and minimize emissions.

e. All process and conveying equipment shall be maintained and operated so that there is no leakage of air contaminants to the atmosphere prior to their treatment in pollution control systems.

f. No article, machine, equipment, or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

g. Visible emissions of all affected sources will be performed as defined in the NESHAP regulations. Results of these inspections as well as records of any corrective actions necessitated by these inspections will be kept on file at the plant for at least five years.

h. Nearly all cases of visible emissions at sources controlled by fabric filters are due to filter bags that have lost their physical integrity; therefore, the plant-wide protocol is to replace ineffective bags as soon as possible after the detection of visible emissions.

3.0 KILNS #1 AND #2 AND THEIR PMCD

3.1 PROCESS DESCRIPTION

Kilns are rotating steel cylinders internally lined with refractory in which kiln feed ("raw material") is transformed into clinker. The kilns are inclined and are slowly rotated while hot combustion gases flow countercurrent to the material flow. Heat, generated by burning natural gas or coal, is transferred from the flame to the material; the latter reaching temperatures of nearly 3,000 °F. These extreme temperatures, in conjunction with other regulated operating parameters, drive the complex chemical reactions involved in clinker production.

The process gases in kiln #1 and kiln #2 are vented through a baghouse prior to being exhausted. Dust entrained in the kiln gas is collected on the outside of the fabric filter bags within the baghouse; thus, allowing the cleaned air stream to be released into the atmosphere. The opacity of the stack emissions is constantly monitored with a continuous opacity monitor (COM).

The kiln #2 system has the raw mill circuit connected to it. The raw mill supplies kiln feed materials to both the Kiln #1 and Kiln #2 systems. The raw mill can operate and also be shutdown independently to the operations in either kiln.

The heat contained in the gas as it traverses the mill and comes into contact with the raw material drives off the moisture. As a result of the kiln and raw mill configuration, the system is classified as an in-line kiln/raw mill process. Whether the gases from kiln #2 are routed through the raw mill or not, they are processed in the baghouse.

3.2 OPERATION PROCEDURES FOR THE KILN AND IN-LINE KILN/RAW MILL

The operation of both kilns will be conducted in accordance with the equipment vendor's recommendations and in-house guidelines. The detailed procedures for kiln operation are contained in the facility's Standard Operating Procedures (SOP). In accordance with 40 CFR 63.1344, the kilns will be operated with a rolling three-hour average of the temperature at the inlet to the PMCD no greater than the limit established during the Demonstration Tests. During kiln operation, key parameters such as PMCD inlet temperatures, opacity of emissions, kiln oxygen concentration, and raw material feed rate are monitored and recorded. Data loggers and/or strip charts are used to track key parameters.

3.3 OPERATION PROCEDURES FOR KILN #1 BAGHOUSE

The particulate emissions from kiln #1 are controlled by a baghouse. The baghouse is operated in accordance with the equipment vendor's recommendations and in-house guidelines. The detailed procedures for baghouse operation are contained in the facility's Standard Operating Procedures (SOP). Kiln #1 will not be operated unless it is vented through its baghouse and the baghouse is operational.

3.4 OPERATION PROCEDURES FOR KILN #2 BAGHOUSE

The particulate emissions from kiln #2 are controlled by a baghouse. The baghouse is operated in accordance with the equipment vendor's recommendations and in-house guidelines. The detailed procedures for baghouse operation are contained in the facility's Standard Operating Procedures (SOP). Kiln #2 will not be operated unless it is vented through its baghouse and the baghouse is operational.

3.5 MAINTENANCE PROCEDURES FOR THE KILNS AND THEIR PMCD.

Preventive maintenance and inspections are performed in accordance with the equipment vendor's recommendations and in-house guidelines. Scheduled inspection and maintenance protocol is documented in the facility's Standard Maintenance Procedures (SMP). On at least an annual basis, portions of the internal refractory will be inspected and replaced/repaired if necessary on both kilns.

The kiln combustion system is thoroughly inspected on each kiln at least annually. The combustion system inspection includes the coal mill, coal cyclones, rotary feeders, expansion joints, and the burner pipe. The inspections are to include thickness tests where necessary. The findings of the combustion system inspection will be documented as will the repairs performed. Typically during these kiln outages, the burner pipe is replaced with one that has been thoroughly inspected and repaired. Once removed from the kiln, the burner pipe is repaired and kept available as a backup unit.

Thermocouples that monitor the temperatures at the inlet to the kiln baghouses will be calibrated quarterly, in accordance with the National Institute of Standards and Technology. This calibration is done by using a multi-meter and measuring the milli-volt signal inside the ducts. The signal is then checked on a chart provided with the meter to confirm that the temperature being recorded are correct. The meter is inspected and calibrated as recommended by the manufacturer. The computer maintenance system will generate a work order on a quarterly basis to ensure that the thermocouple calibrations and inspections are completed as required.

3.6 EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL

Stack emissions from each kiln shall not exceed the following:

a. 0.30 lb. of particulate matter / ton of dry feed introduced into the kiln
b. 20% opacity
c. Dioxin and furan limits as specified under 40 CFR 63.1342 *(inlet temperature limits to the PMCD are pending results of Performance Tests)*
   i. 0.40 ng TEQ per dscm corrected to 7% oxygen when the inlet temperature to the PMCD is 400 °F or less.
   ii. 0.20 ng TEQ per dscm corrected to 7% oxygen when the inlet temperature to the PMCD is greater than 400 °F.

d. Temperature limits are re-established for the inlet to the APCD every 30 months. Temperature limits are established as a 3-hr rolling average; and compliance to the limit is also monitored by a 3-hr rolling average. The current temperature limits, as of May 2009 are:
458 deg. F – Kiln No. 1
400 deg. F – Kiln No. 2 (Raw Mill not Operating)
450 deg. F – Kiln No. 2 (Raw Mill Operating)

3.7 MONITORING PROCEDURES FOR THE KILNS AND THEIR PMCD

Opacity of emissions from both kiln PMCD will be monitored with a continuous opacity monitor (COM).

4.0 CLINKER COOLERS AND THEIR PMCD

4.1 PROCESS DESCRIPTION

Clinker coolers serve to cool the clinker immediately after leaving the kilns for conveying purposes. Secondly, the cooling process locks in the desired product qualities by "freezing" the clinker mineralogy. Cooling at this facility involves passing ambient air through a traveling bed of hot clinker which transfers the heat from the clinker to the air stream. Most of this warm air is introduced into the kiln as combustion air. Dust generated in the clinker cooling process that is contained in the warm air that does not go into the kiln is removed from the air by fabric filter bags situated inside baghouses. The cleaned air is allowed to pass through the bags and exit into the atmosphere through an exhaust stack.

At this facility, each kiln is equipped with its own clinker cooler which, in turn, is serviced by its own baghouse. The cleaned gases from both baghouses are emitted through a common stack. The opacity of these emissions is continuously monitored with a continuous opacity monitor (COM).

4.2 OPERATION PROCEDURES FOR THE CLINKER COOLERS

The operation of the clinker coolers is conducted in accordance with the equipment vendor's recommendations and in-house guidelines. The detailed procedures for the operation of the clinker coolers are contained in the facility's Standard Operating Procedures (SOP). Since the kilns cannot operate without operating the clinker coolers, neither the kiln nor the clinker cooler will be operated without operating the clinker cooler baghouse.

4.3 OPERATION PROCEDURES FOR THE CLINKER COOLERS' PMCD

The clinker cooler baghouses are operated in accordance with the equipment vendor's recommendations and in-house guidelines. The detailed procedures for baghouse operation are contained in the facility's Standard Operating Procedures (SOP).

4.4 MAINTENANCE PROCEDURES FOR THE CLINKER COOLERS AND THEIR PMCD

Preventive maintenance and inspections of the clinker coolers and the associated baghouses are performed in accordance with the equipment vendor's recommendations and in-house guidelines. Scheduled inspection and maintenance protocol is documented in the facility's Standard Maintenance Procedures (SMP).

4.5 EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL

Stack emissions from each clinker cooler shall not exceed the following:

a. 0.10 lb. of particulate matter / ton of dry feed introduced into the kiln
b. 10% opacity

4.6 MONITORING PROCEDURES FOR THE CLINKER COOLERS' PMCD

Opacity of the emissions from the clinker coolers' exhaust stack will be monitored with a continuous opacity monitor (COM).

5.0 FINISH MILLS AND THEIR PMCD

5.1 PROCESS DESCRIPTION

Three finish mills exist at the facility. These mills grind clinker and certain additives such as gypsum and sometimes process dust into a very fine powder. Material that is not sufficiently milled is separated from the finer material in air separators and returned to the mills for further grinding. Once the desired fineness is achieved, the final product, referred to as portland cement, is stored until it is ready for distribution to customers.

Air sweep through the mills and separators is cleaned in dust collectors where the dust is removed from the gas stream by fabric filters. The dust is returned to the process whereas the cleaned air is exhausted into the atmosphere.

5.2 OPERATION PROCEDURES FOR THE FINISH MILLS

The operation of the finish mills is performed in accordance with the recommendations of the equipment manufacturer and in-house guidelines. The detailed procedures for finish mill operation are contained in the facility's Standard Operating Procedures (SOP).

5.3 OPERATION PROCEDURES FOR THE FINISH MILLS' PMCD

The operation of the finish mills' dust collectors is performed in accordance with the recommendations of the equipment manufacturer and in-house guidelines. The detailed procedures for the operation of the control devices are contained in the facility's Standard Operating Procedures (SOP).

5.4 MAINTENANCE PROCEDURES FOR THE FINISH MILLS AND THEIR PMCD

Preventive maintenance and inspections of the finish mills and the associated dust collectors are performed in accordance with the equipment vendor's recommendations and in-house guidelines. Scheduled inspection and maintenance protocol is documented in the facility's Standard Maintenance Procedures (SMP).

5.5 CORRECTIVE ACTIONS

Typically, the corrective action employed to dust collectors that are showing visible emissions is the replacement of damaged bag(s). The maintenance personnel check for torn, or leaking bags by placing fluorescent powdered dye into the dust collection system, upstream of the baghouse. The fluorescent dye indicates which bag(s) inside the dust collector are damaged; thereby allowing for dust to exit the fan exhaust stack. Compromised bag(s) are taken out and replaced with new one(s).

5.6 EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL

Opacity of emissions from finish mills and separators shall not exceed 10%.

6.0 MATERIAL HANDLING OPERATIONS

6.1 PROCESS DESCRIPTION

The material handling operations (MHO) at Mountain Cement Company consists of raw material, clinker, or finished product storage bins; conveying system transfer points; bagging systems; and bulk loading or unloading systems. These sources are controlled with APCDs (*i.e.*, dust collectors). The dust collectors contain fabric filters that trap dust and separate it from the gas air stream. The dust is returned to the process and the cleaned air is released into the atmosphere.

6.2 OPERATION PROCEDURES FOR THE MATERIAL HANDLING OPERATIONS

The operation of the material handling operations is conducted in accordance with the recommendations of the equipment manufacturer and in-house guidelines. The detailed procedures are contained in the facility's Standard Operating Procedures (SOP).

6.3 OPERATION PROCEDURES FOR THE MATERIAL HANDLING PMCD

The operation of the material transfer points' dust collectors is performed in accordance with the recommendations of the equipment manufacturer and in-house guidelines. The detailed procedures for the operation of the control devices are contained in the facility's Standard Operating Procedures (SOP).

6.4 MAINTENANCE PROCEDURES FOR THE MHO AND THEIR PMCD

Preventive maintenance and inspections of the material handling operations and the associated dust collectors are performed in accordance with the equipment vendor's recommendations and in-house guidelines. Scheduled inspection and maintenance protocol is documented in the facility's Standard Maintenance Procedures (SMP).

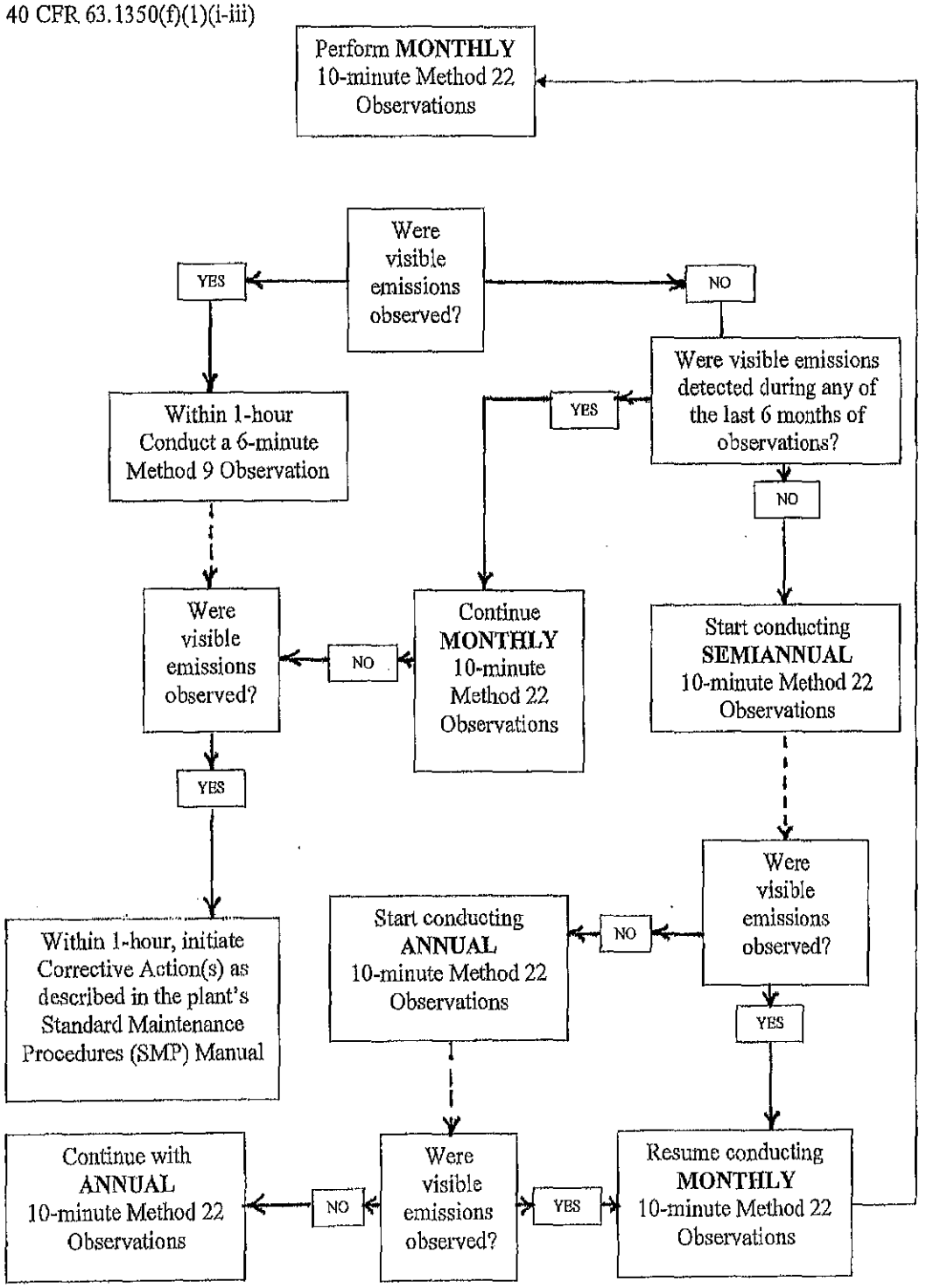
6.5 EMISSION LIMITS AS DESCRIBED IN 40 CFR 63, SUBPART LLL

Opacity of emissions from material handling operations shall not exceed 10%.

6.6 MONITORING PROCEDURES FOR THE MHOS' PMCD
40 CFR 63.1350(a)(4)(i – iv)

Visible emissions tests shall be conducted while the affected source and APCD are in operation. If visible emissions are observed during any Method 22 certified test, a six-minute USEPA Method 9 test must begin within 1-hour of the observation of visible emissions.

6.6 MONITORING PROCEDURE'S FOR THE MHOS' PMCD
40 CFR 63.1350(f)(1)(i-iii)



Revised 11-18-13
11-26-2013 032098

Appendix E

Actual Emissions Methodologies

i. PM/PM10 Emissions: Actual particulate emissions from each kiln (Kiln #1 and Kiln #2) shall be determined using the tested emission rate (lb/ton feed) and raw material feed to the kilns. Testing for PM/PM_{10} shall follow EPA Reference Methods 1-4 and 5. Annually, or as otherwise specified by the Administrator, the kilns shall be tested for particulate emissions.

ii. SO_2 Emissions: Actual emissions shall be determined using the average annual CEM lb/hr emission rate (Kiln #1 and Kiln #2) meeting the requirements of Chapter 5, Section 2(j) and the hours of operation of the each kiln.

a. The actual SO_2 lb/hr emission rate shall be calculated using the arithmetic average of the 1-hour averages meeting the requirements of Chapter 5, Section 2(j) of the WAQSR. Data (and associated monitoring data monitoring hours) which does not meet the requirements of Chapter 5, Section 2(j) of the WAQSR shall not be included in the averages.

iii. NO_x Emissions: Actual emissions shall be determined by using the average annual CEM lb/hr emission rate (Kiln #1 and Kiln #2) meeting the requirements of Chapter 5, Section 2(j) and the hours of operation of the each kiln.

a. The actual NO_x lb/hr emission rate shall be calculated using the arithmetic average of the 1-hour averages meeting the requirements of Chapter 5, Section 2(j) of the WAQSR. Data (and associated monitoring data monitoring hours) which does not meet the requirements of Chapter 5, Section 2(j) of the WAQSR shall not be included in the averages.

iv. CO Emissions: Testing for CO shall follow EPA Reference Methods 1-4 and 10 to determine a CO lb/MMBtu emission rate. Mountain Cement Company shall document the percentage of petroleum coke in the coal/petroleum coke mixture burned in Kiln #1 and Kiln #2 during each test. Actual emissions shall be determined by using the tested lb/MMBtu and heat input based on reported fuel usage for each kiln and heat input based on reported fuel usage for each kiln. The Division will accept the average of stack test results for the respective calendar year if multiple stack tests are conducted during the calendar year. Annually, or as otherwise specified by the Administrator, the kilns shall be tested for CO.

v. VOC Emissions: Testing for VOCs shall follow EPA Reference Methods 1-4 and 25 or an alternatively approved reference method to determine a VOC lb/MMBtu emission rate. Mountain Cement Company shall document the percentage of petroleum coke in the coal/petroleum coke mixture burned in Kiln #1 and Kiln #2 during each test. Actual emissions shall be determined by using the tested lb/MMBtu and heat input based on reported fuel usage for each kiln and heat input based on reported fuel usage for each kiln. The Division will accept the average of stack test results for the respective calendar year if multiple stack tests are conducted during the calendar year. Annually, or as otherwise specified by the Administrator, the kilns shall be tested for VOCs.

vi. Fluoride, and Lead Emissions: Actual emissions shall be determined by the fluoride (F) and lead (Pb) content of the coal/petroleum coke and amount of coal/petroleum coke combusted.

vii. For each source, Mountain Cement Company shall include fugitive emissions to the extent quantifiable and emissions associated with startups, shutdowns and malfunctions.

Appendix F
Reserved (Modified October 21, 2014)